RDD

REDDING REGIONAL AIRPORT

2024

Airport Land Use Compatibility Plan Update

DRAFT

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Chapter One

PURPOSE AND SCOPE

1.1 INTRODUCTION

This document is the airport land use compatibility plan (ALUCP) for the environs of Redding Regional Airport (RDD), located in the City of Redding, California. **Exhibit 1A** depicts the location of RDD. This ALUCP can be utilized by the Shasta County Airport Land Use Commission (ALUC) to update its state-mandated ALUCP for the environs of Redding Regional Airport, under the authority of the California State Aeronautics Act, California Public Utilities Code (PUC) Section 21670 et seq. The previous ALUCP, the Comprehensive Land Use Plan for the Redding Municipal Airport and Surrounding Area, was adopted by the Shasta County ALUC on May 14, 1984.

This ALUCP has also been prepared with reference to, and is consistent with, guidance provided by the California Department of Transportation (Caltrans) Division of Aeronautics (Division) in the 2011 version of the California Airport Land Use Planning Handbook (Handbook), pursuant to California PUC Sections 21674.5 and 21674.7.

This ALUCP is intended to protect and promote the safety and welfare of residents, businesses, and airport users near RDD while supporting the continued operation of RDD. Specifically, the plan seeks to:

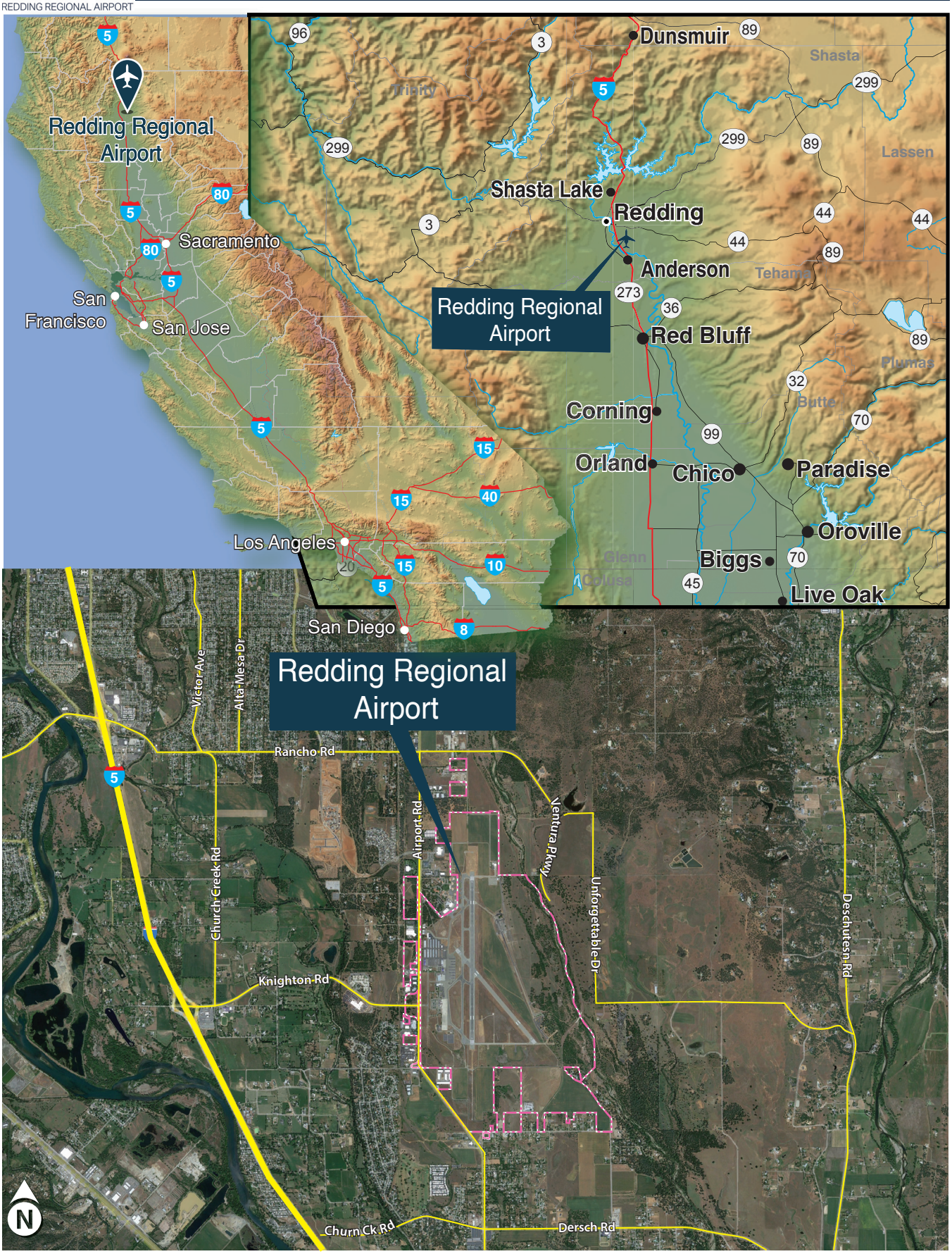
- Ensure that people and facilities are not concentrated in areas that are susceptible to aircraft accidents;
- Protect the public from the adverse effects of airport noise; and
- Ensure that no structures or activities encroach upon or adversely affect the use of navigable airspace.

1.2 PURPOSE OF THE ALUCP

1.2.1 Purpose

Airports play a vital role in the transportation systems and economies of cities and counties throughout the nation. Redding Regional Airport is a full-service regional airport that provides services such as commercial and business travel, tourism, emergency response, fire suppression, and law enforcement. In recognition of the important role airports play and proper land use compatibility planning within the State of California, the California State Legislature enacted laws that mandate the creation of airport land use commissions. The laws were adopted in 1967 to assist local agency land use compatibility efforts and are intended to protect:

> *"… public health, safety, and welfare by encouraging orderly expansion of airports and the adoption of land use measures that minimizes exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses."*


Redding Regional Airport
Sacramento
San Francisco
San Jose
Los Angeles
San Diego
Dunsmuir
Shasta Lake
Redding
Anderson
Red Bluff
Corning
Orland
Chico
Paradise
Oroville
Biggs
Live Oak
Shasta
Lassen
Tehama
Plumas
Butte
Glenn
Colusa
Trinity
Redding Regional Airport
Victor Ave
Alta Mesa Dr
Rancho Rd
Airport Rd
Ventura Pkwy
Unforgettable Dr
Deschutes Rd
Church Creek Rd
Knighton Rd
Churn Ck Rd
Dersch Rd
N

To achieve this goal, the ALUC has two primary functions:

- To prepare and adopt an ALUCP with a 20-year planning horizon for each airport within its jurisdiction; and
- To review local agency land use actions and airport plans for consistency with the land use compatibility policies and criteria in the ALUCP.

Updating Shasta County's ALUCP is an important component in the implementation of effective land use compatibility policies and criteria related to proposed development in the vicinity of RDD. The update would also establish current, accurate planning boundaries around RDD that define height/airspace protection, noise, and safety areas for policy implementation, as well as overflight areas within which notification of RDD proximity is required as part of real estate transactions.

1.3 RESPONSIBILITIES AND REQUIREMENTS

Airport land use compatibility involves two overarching concepts: a community's need for safe and efficient air transportation and orderly compatible land use development within the airport environs. These two concepts must be balanced to achieve a favorable result for the airport, as well as the residents and businesses in the airport's vicinity.

Airport land use compatibility planning can be a complicated matter when considering the various levels of government and documentation involved. The sections below briefly discuss the specific responsibilities of each governmental entity regarding aviation and land use, as necessary. It is important to note that some levels of government are limited in the actions they may take with respect to airport land use compatibility; care is taken to describe these limitations, where appropriate.

1.3.1 Federal Government

The federal government, primarily through the Federal Aviation Administration (FAA), has the authority and responsibility to control aircraft operations associated with airport noise impacts through the following methods:

- **Implement and Enforce Aircraft Operational Procedures:** Aircraft operational procedures include pilot responsibilities, compliance with air traffic control instructions, flight restrictions, and monitoring careless and reckless operation of aircraft. Where and how aircraft are operated while not on the ground at an airport are under the complete jurisdiction of the FAA.

- **Manage the Air Traffic Control System:** The FAA is responsible for the control of navigable airspace and reviews any proposed alterations in flight procedures for noise abatement, based on safety of flight operations, safe and efficient use of navigable airspace, management and control of the national airspace and air traffic control systems, effects on security and national defense, and compliance with applicable laws and regulations.

- **Certification of Aircraft:** The FAA requires the reduction of aircraft noise through certification, modification of engines, or aircraft replacement, as defined in Title 14 Code of Federal Regulations (14 CFR) Part 36.

- **Pilot Licensing:** Individuals licensed as pilots are trained under strict guidelines that concentrate on safe and courteous aircraft operating procedures, many of which are designed to lessen the effects of aircraft noise.

- **FAA Airport Compliance and Grant Assurances:** FAA Order 5190.6B, *FAA Airport Compliance Manual*, defines the airport sponsor's role with regard to land use planning and implementation actions:

  > *"to reduce the effect of noise on residents of the surrounding area. Such actions include optimal site location, improvements in airport design, noise abatement ground procedures, land acquisition, and restrictions on airport use that do not unjustly discriminate against any user, impede the federal interest in safety and management of the air navigation system, or unreasonably interfere with interstate or foreign commerce."*

  Additionally, upon receipt of FAA grant funding, the airport sponsor agrees to take appropriate action, including the adoption of zoning laws, to the extent reasonable to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations, in accordance with FAA Grant Assurance 21, *Compatible Land Use*.

- **Noise Compatibility Studies:** 14 CFR Part 150 establishes procedures and criteria for the evaluation of airport noise-related impacts. Although the FAA may provide guidance for airport land use compatibility, it has no jurisdiction over local planning decisions.

1.3.2 State of California

1.3.2.1 Aviation

With respect to aviation, the Caltrans Division of Aeronautics is directed by the *State Aeronautics Act* to engage in activities that protect the public interest in aeronautics and aeronautical progress. In cooperation with, and in support of, the FAA, the Division serves as the advisor to Caltrans, ALUCs, and airport sponsors for ways to better include safe aviation into the fabric of California communities and multimodal transportation planning.

1.3.2.2 Land Use

The State of California grants the authority of land use regulation to local governments. This regulation is accomplished through the use of general plans and zoning ordinances. The state has also established airport noise standards, noise insulation standards, and requirements for the establishment of ALUCs. State staff may also coordinate with local agencies to encourage environmental mitigation measures to discourage the encroachment of incompatible land uses near airport facilities. As with the federal government, local planning decisions are at the discretion of the local jurisdiction and the state may not interfere with these decisions.

1.3.2.3 Real Estate Disclosure

California state law requires sellers of real property to disclose any facts that materially affect the value and desirability of property. Such disclosure is required when the property is either within two miles of an airport or within an airport influence area (AIA). The law defines the AIA as the area in which airport-related factors may significantly affect land uses or necessitate restrictions on those uses, as determined by an ALUC. As outlined in PUC 21675(c), the AIA is usually the planning area designated by an ALUC for each airport.

1.3.2.4 Noise Insulation Standards

The *California Noise Insulation Standards* are found in California Building Code Title 24, Chapter 12, Section 1207. These standards establish uniform minimum noise insulation performance standards to protect persons within new buildings from the effects of noise. These minimum noise insulation performance standards require the Community Noise Equivalent Level (CNEL) to not exceed 45 decibels (dB) in any habitable room with all doors and windows closed.

1.3.3 City and County Governments

Cities and counties may be engaged in the national aviation system by owning and operating an airport. As an airport proprietor, a city or county has limited power to control what types of civil aircraft use the airport, or to impose curfews or other use restrictions if the airport has received federal funds. This power is limited by the rules of 14 CFR Part 161, which states that airport proprietors may not take actions that (1) impose an undue burden on interstate or foreign commerce, (2) unjustly discriminate between different categories of airport users, or (3) involve unilateral action in matters preempted by the federal government.

Within the limits of the law and financial feasibility, airport proprietors may mitigate noise or acquire land (or partial interests in land, such as air rights, easements, and development rights) to ensure the use of property for purposes that are compatible with airport operations.

Cities and counties bear responsibility for the orderly development of areas surrounding the airports within their respective jurisdictions. To achieve this goal, each jurisdiction is charged with making sure all applicable planning documents and building codes are consistent with its ALUCP or going through the overrule process, as outlined in California Government Code, Section 65302.3. A local jurisdiction that includes territory within the AIA boundary is also obligated to bring local plans into consistency with its ALUCP and submit land use actions, such as general plan or specific plan amendments, revisions to ordinances or regulations, airport plans, and individual development projects to the ALUC for a determination of consistency under PUC Section 21676.

1.3.3.1 Airport Land Use Commission

At the county level of government exists a unique intersection of airport and land use compatibility planning with ALUC administration. As previously discussed, the establishment of an ALUC is required

for any county with an airport that is operated for the benefit of the public. The role of the commission is to "*formulate a comprehensive plan that will provide for the orderly growth at each public use airport and the area surrounding the airport within the jurisdiction of the commission*" (State of California, PUC Section 21675).

In Shasta County, the ALUC membership is comprised of seven commissioners. Two members are appointed to represent Shasta County cities. The Shasta County Board of Supervisors appoints two members to represent Shasta County on the ALUC. Two aviation experts are appointed to represent airport managers of the public-use airports in Shasta County. The seventh member is appointed by the other six members of the ALUC to represent the general public.

1.4 SCOPE OF THE ALUCP

1.4.1 ALUCP Assumptions

The updated ALUCP is based on three key planning assumptions for each public-use airport:

1) Airport layout plan (ALP)/approved airport diagrams;
2) Aviation activity forecasts; and
3) Future noise exposure contours.

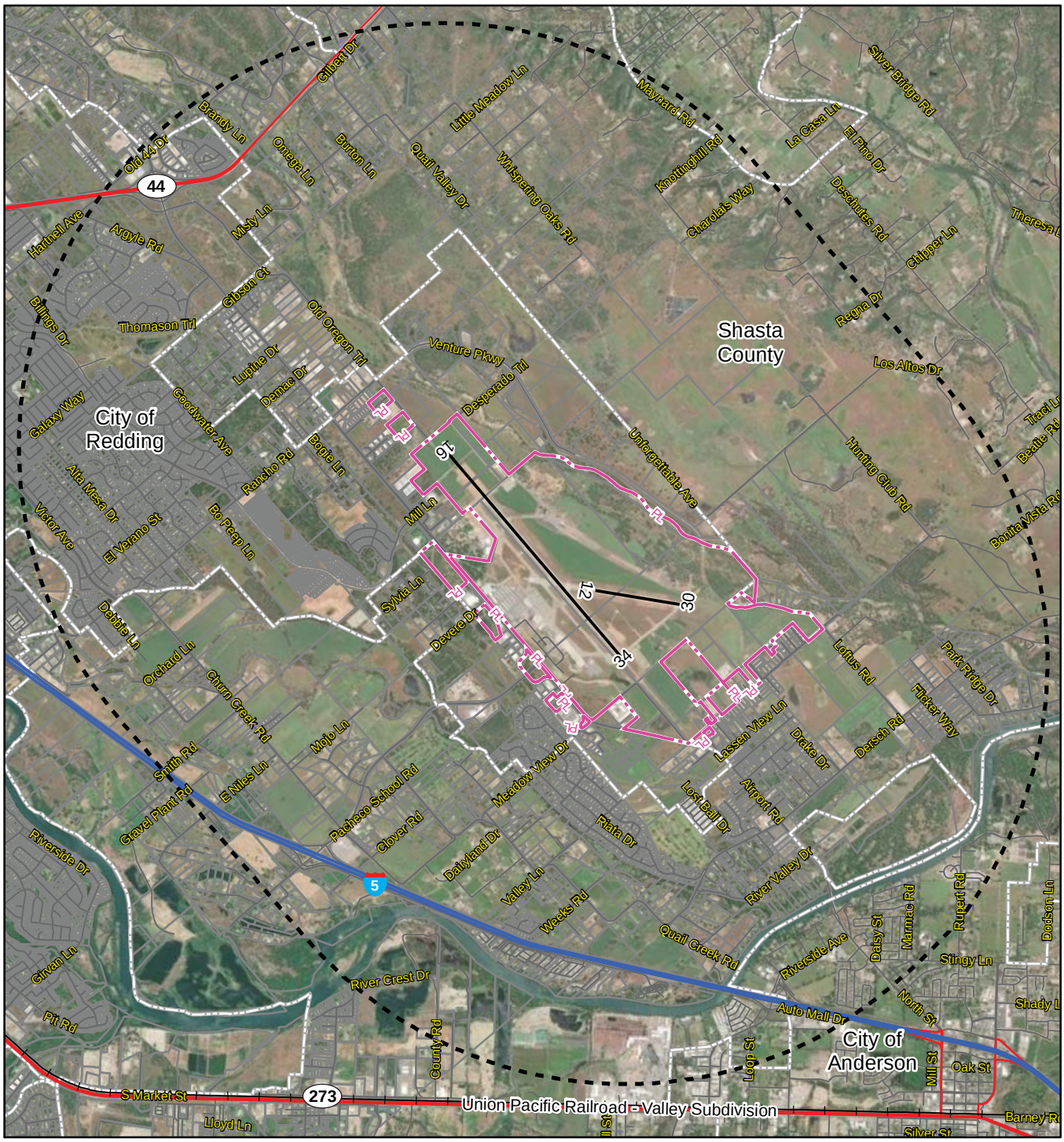
These three key planning assumptions are provided by the individual airports or prepared in coordination with individual airports as part of an ALUCP update. State law requires that ALUCs base their ALUCPs on up-to-date airport master plans or ALPs (PUC §21675[a]). Additionally, as discussed in the Handbook, Caltrans "*will accept a signed ALP drawing in lieu of an FAA-approved ALP as the basis of an ALUCP update, provided the drawing is prepared consistent with the California Code of Regulations, Title 21, Section 3534*."

1.4.2 Geographic Scope

The geographic scope for this ALUCP is demarcated by an AIA boundary surrounding Redding Regional Airport. The AIA is "the area in which current and projected future airport-related noise, safety, airspace protection, or overflight factors/layers may significantly affect land use or necessitate restrictions on uses by an airport land use commission." The AIA boundary was established using the outer boundary of the 14 CFR Part 77 conical surface for Redding Regional Airport. 14 CFR Part 77 defines a series of airspace boundaries around an airport to determine if there are obstructions to air navigation. The conical surface is the outer boundary of the 14 CFR Part 77 airspace boundaries and generally represents the traffic pattern for an airport. The AIA boundary for RDD is depicted on **Exhibit 1B**.

1.4.3 Limitations of the ALUCP

The ALUC has no authority over airport operations (PUC Section 21674[e]); therefore, nothing in this ALUCP shall be interpreted as regulating or conveying any recommendations concerning aircraft operations to/from/at the airport. (See Section 2.3.2.)



Legend

- Airport Property Boundary
- Ultimate Runway Centerline[3]
- Airport Influence Area (AIA)[1]
- Railroad
- Municipal Boundaries[2]
- Interstate
- Highway
- Roads
- Parcels

N

0 5,000 10,000

1" = 5,000'

[1]Part 77 Conical Surface
[2]City of Redding GIS Portal
[3]2024 Redding Regional Airport Master Plan

Sources: ESRI Basemap Imagery (2023), City of Redding, Shasta County Roads, Coffman Associates Analysis

The ALUCP is not a specific development plan. This ALUCP does not designate specific land uses for any particular parcel or parcels of land. In addition, the land use compatibility policies and criteria contained within this document are intended to promote compatible land development in the vicinity of airports contained with this ALUCP. They are not intended to remove existing incompatible uses. ***None of the compatibility criteria contained herein are retroactive to existing land uses***.

Incompatible development that currently exists is recognized as existing nonconforming land use by the ALUC. Although this nonconforming land use is recognized, neither this ALUCP nor the ALUC finds these uses to be consistent with this ALUCP.

In addition to land uses that are currently developed and in use, *existing land uses* shall include vested development projects that have not yet been built if at least one of the conditions outlined in Section 2.4.1 is met.

1.5 ALUCP ADOPTION, IMPLEMENTATION, AND AMENDMENTS

1.5.1 ALUCP Adoption

Adoption of this ALUCP is coordinated through the Shasta County Planning Division, which provides staffing and administrative support for the ALUC. The ALUC is obligated to involve the affected local agencies in the adoption process by holding a public hearing regarding the document prior to its formal adoption. For the purposes of this plan, affected local agencies include (but are not limited to) Shasta County and the Cities of Redding and Anderson. (See Section 3.3.) As discussed in the Handbook, adoption of the ALUCP begins a statutory 180-day period within which the local agencies must either modify its general plan and applicable specific plans or take the steps necessary to overrule the ALUC (Government Code, Section 65302.3) using the process outlined in Section 1.5.2 below.

1.5.2 Overrule Policy

1.5.2.1 Overrule Process

As outlined in the Handbook, California Government Code Section 65302.3(a) states that a county's or city's general plan and any applicable specific plans "shall be consistent" with an ALUCP and that every affected county or city must amend its general plan and specific plans as necessary to keep them consistent with the ALUCP. If the ALUC determines the local plan to be inconsistent with the ALUCP, the local agency shall reconsider its plan or overrule the ALUC's decision.

The overrule process involves three mandatory steps:

1) Holding a public hearing
2) Making specific findings that the action proposed is consistent with the purposes of the ALUC statute
3) Approval of the proposed action by a two-thirds vote of the agency's governing body

In accordance with PUC 21676, at least 45 days prior to the decision to overrule the ALUC, the local agency shall provide a copy of the proposed overrule decision and accompanying findings to the ALUC and the Division. The ALUC and the Division may provide comments to the local agency's governing body within 30 days of receiving the proposed decision and findings. While the ALUC and Division comments are advisory, they must be included in the public record of any decision to overrule the ALUC.

1.5.2.2 Substance of Finding

The essential substance of the findings that accompany a local agency overruling of an ALUC decision is indicated in PUC Section 21670. Section 21670(a) indicates five separate purposes for the legislation:

- "*…to provide for the orderly development of each public use airport in this state*…"
- "*…to provide for the orderly development of…the area surrounding these airports so as to promote the overall goals and objectives of the California airport noise standards*…"
- "*…to provide for the orderly development of…the area surrounding these airports so as…to prevent the creation of new noise and safety problems*."
- "*…to protect the public health, safety, and welfare by ensuring the orderly expansion of airports*…"
- "*…to protect the public health, safety, and welfare by…the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses*."

Although findings do not need to address each of purpose point by point, it is essential that all of these purposes be collectively addressed. The following sections outline possible approaches to demonstrating a proposed action that would be consistent with these purposes.

(a) Providing for Orderly Development of the Airport

The findings shall document:

(1) How the local agency has considered any adopted long-range development plans that may exist for the airport;
(2) How the local agency plans to support development of the airport over at least the next 20 years; and
(3) How local land use planning and zoning actions would serve to protect the approaches to the airport runways.

(b) Relationship to California Airport Noise Standards

The findings should:

(1) Document any inconsistencies between noise element policies and noise compatibility criteria in the ALUCP and attempt to determine why the differences exist;

(2) Show how noise element policies will assure conformance with the state noise airport standards; and

(3) Identify any measures to be incorporated into local development to mitigate existing and foreseeable airport noise problems.

(c) Preventing Creation of New Noise and Safety Problems

The findings should:

(1) Document any inconsistencies between the proposed land use action and the safety compatibility criteria in the ALUCP;

(2) Describe the measures taken to ensure risks (to people and property on the ground, as well as to the occupants of aircraft) associated with the land use proposal are held to a minimum; and

(3) Indicate that the proposed land use action falls within a level of acceptable risk considered to be a community norm.

(d) Protecting Public Health, Safety, and Welfare by Ensuring Orderly Expansion of the Airport

The findings should:

(1) Document any inconsistencies between the proposed land use action and the safety compatibility criteria in the ALUCP;

(2) Describe the measures taken to ensure risks (to people and property on the ground, as well as to the occupants of aircraft) associated with the land use proposal are held to a minimum; and

(3) Indicate that the proposed land use action falls within a level of acceptable risk considered to be a community norm.

(e) Minimizing the Public's Exposure to Excessive Noise and Safety Hazards

The statute implies a quantitative assessment of noise exposure and safety hazards. The purpose of the statute is not only to reduce the public's exposure to noise and safety hazards, but to minimize exposure in areas with excessive noise or safety concerns. To adopt a finding that demonstrates consistency with this purpose, the local agency must first determine whether the existing noise exposure or safety hazards are excessive.

(1) If existing noise and safety hazards are not excessive, the actions taken by the local agency must prevent the creation of new noise and safety problems. (See Section 1.5.2.2(c) above.)

(2) If the existing exposure is excessive, the local agency must show how its action in overruling an ALUC determination of inconsistency minimizes additional exposure to the noise and safety concerns that have been identified.

(3) Finally, the local agency must show the extent to which land uses in the area in question are already incompatible with airport operations and how an action to overrule an ALUC determination would not create a new incompatible use or expose additional persons or property to noise and safety hazards associated with existing compatible uses.

1.5.3 ALUCP Implementation

Upon adoption of the ALUCP and where local agencies have amended their general and specific plans to be consistent with the ALUCP, the following types of actions proposed within the AIA must be submitted to the ALUC for determination of consistency prior to approval by the local jurisdiction:

- Adoption of a general plan, specific plan, or any amendments
- Airport and heliport plans, including master plans, expansion plans, and plans for the construction of a new facility (see Policy 2.9)

1.5.4 ALUCP Amendments

Major amendments to the compatibility plan (revising the policies in a manner that would change their applicability to a public agency, adding new policies, or revising maps) cannot be executed more than once per calendar year.[1] Minor amendments (addressing grammatical, typographical, or minor technical errors that do not affect policies or the manner in which those policies are applied) can be completed as often as needed.[2] ALUCP amendments may address any issue deemed appropriate by the ALUC. State law also requires the ALUC to review updates to airport master plans, airport layout plans, and proposals for airport expansion.[3] The ALUCP must be amended, as needed, to reflect updates and revisions to airport plans.

1.6 ENVIRONMENTAL REVIEW

Preparation of *California Environmental Quality Act* (CEQA) documentation is required, based on legal precedent, when adopting or amending an ALUCP. A decision reached by the California Supreme Court in 2007 clarified the application of CEQA to ALUCPs (*Muzzy Ranch Co. v. Solano County Airport Land Use Commission*, 41 Cal. 4th 372, June 21, 2007, modified September 12, 2007). The court ruled that an ALUCP is a "project" subject to environmental review under CEQA. The court explained that an ALUCP "carries significant, binding regulatory consequences for local government…" even if subsequent action by a local land use regulatory agency is required before development projects can be authorized. The court noted that an ALUCP might indirectly affect the environment, even if it would not cause a direct physical change in the environment. The court specifically discussed the possibility that adoption of land use restrictions in the vicinity of an airport could cause development that would have occurred in the airport area to shift elsewhere, potentially causing an adverse effect on the environment.

According to the court, a "common sense" exemption from CEQA may be invoked by an ALUC "[w]here it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment…"; however, the CEQA exemption may be used only when the specific facts in question reveal that use of the exemption is justified.

[1] California Public Utilities Code §21675(a)
[2] California Department of Transportation, Division of Aeronautics, California Airport Land Use Planning Handbook § 2.4.2 ALUCP Amendments, October 2011
[3] California Public Utilities Code §§21674(d), 21676(c)

In accordance with Public Resources Code, Section 21096, the ALUCP and Handbook shall be utilized as technical resources to assist in the preparation of environmental documentation related to airport-related safety hazards and noise problems. Additionally, a lead agency shall not adopt a negative declaration for a development action unless the lead agency considers whether the project will result in a safety hazard or noise problem for persons using the airport, or for persons residing or working in the project area.

1.7 ABOUT THIS DOCUMENT

This document includes all components of the updated ALUCP for Redding Regional Airport. In addition to this chapter, which outlines the ALUCP purpose and scope, the remaining three chapters provide the following information:

1. *Chapter Two: Environs* provides an overview of Redding Regional Airport's setting, AIA, safety zones, noise, airspace, and overflight areas. Chapter Two will also discuss existing and planned land uses, as well as current and future airport facilities. Additionally, appendices to supplement the analysis are presented in the ALUCP. These include airport facilities, operations, area land use, noise analysis, and safety information.

2. *Chapter Three: Implementation and Definitions* includes all applicable implementation policies and guidance for this ALUCP, as well as definitions of land use compatibility terms used in this plan.

3. *Chapter Four: Compatibility Policies and Criteria* includes the safety, noise, and height restriction guidelines to be used when considering land use developments within the vicinity of the AIA boundary.

Appendices are also provided that include implementation materials for use by ALUC staff and local planning agencies to achieve the land use compatibility goals of this plan.

Chapter Two

REDDING REGIONAL AIRPORT ENVIRONS

2.1 AIRPORT ENVIRONS

Chapter Two provides an overview of Redding Regional Airport's (RDD) environs, airport influence area (AIA), safety zones, noise, airspace and overflight areas, current and future facilities, and existing and planned land uses.

Redding Regional Airport is owned and operated by the City of Redding, California. The airport covers approximately 1,500 acres of land at an elevation of 505 feet above mean sea level (MSL). It is a public-use facility that offers commercial services. The FAA 2023-2027 *National Plan of Integrated Airport Systems* (NPIAS)[1] classifies RDD as a commercial service primary service provider in the nonhub category.

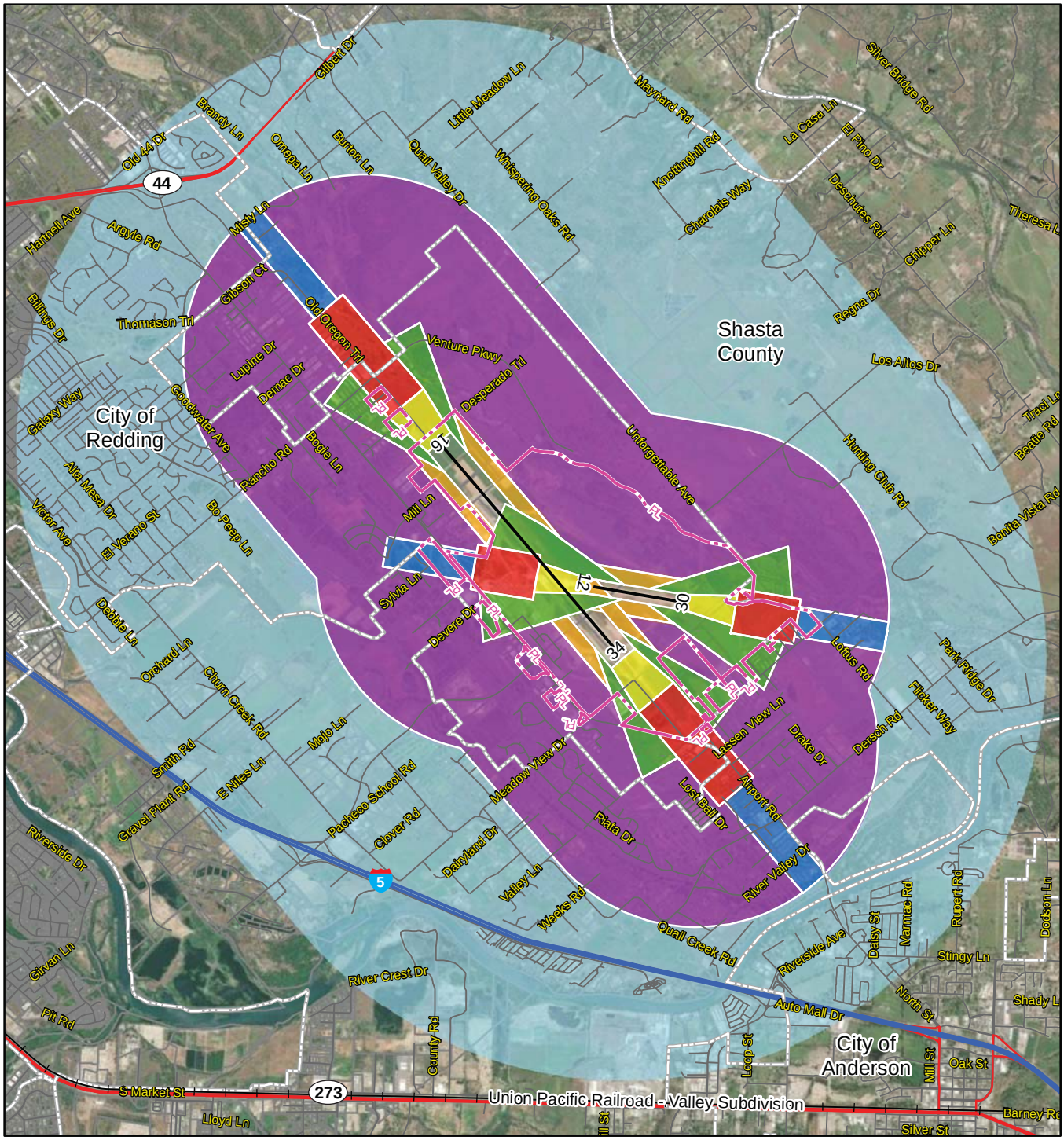
2.1.1 Safety Zones

The AIA and safety zones for RDD are shown on **Exhibit 2A**. Figure 3A of the *California Airport Land Use Planning Handbook* (Handbook) provides three example zones for general aviation airports, which are differentiated by runway length. The Handbook zone examples are provided as a starting point for developing safety zones specific to an airport. As discussed below, the airport has two runways: Runway 16-34, which is 7,003 feet long by 150 feet wide, and Runway 12-30, which is 5,067 feet long by 150 feet wide. The current master plan development concept, which will be submitted to the Federal Aviation Administration as an update to the airport layout plan (ALP), anticipates a 2,217-foot reduction in the length of Runway 12-30 and a 1,997-foot extension to Runway 16-34 over the planning period, resulting in ultimate runway lengths of 9,000 feet for Runway 16-34 and 2,850 feet for Runway 12-30. The safety zones for Runway 16-34 are based on the *long general aviation runway* example and the safety zones for Runway 12-30 are based on the *short general aviation runway* example. For this plan, the outermost zone in the Handbook example is replaced by the Title 14 Code of Federal Regulations (CFR) Part 77 conical surface, which also represents the airspace and overflight review area boundaries. Additional information regarding the safety compatibility zones can be found in **Appendix B**.

2.1.2 Noise

The standard methodology for analyzing noise conditions at airports involves the use of a computer simulation model. The Airport Environmental Design Tool (AEDT) version 3f is accepted by the State of California and is required by the Federal Aviation Administration (FAA) for developing noise exposure contours. This model was used to develop the noise exposure contours for this airport land use compatibility plan (ALUCP). The following sections describe the noise modeling inputs for the noise exposure contours shown on **Exhibit 2B** and **Exhibit 2C**. Additional information regarding the noise modeling process and land use compatibility thresholds can be found in Appendix A.

[1] Federal Aviation Administration, National Plan of Integrated Airport Systems (NPIAS) 2023-2027 (https://www.faa.gov/airports/planning_capacity/npias), September 2022



Legend

- Airport Property Boundary
- Ultimate Runway Centerline[3]
- Railroad
- Municipal Boundaries[4]
- Interstate
- Highway
- Roads
- Parcels

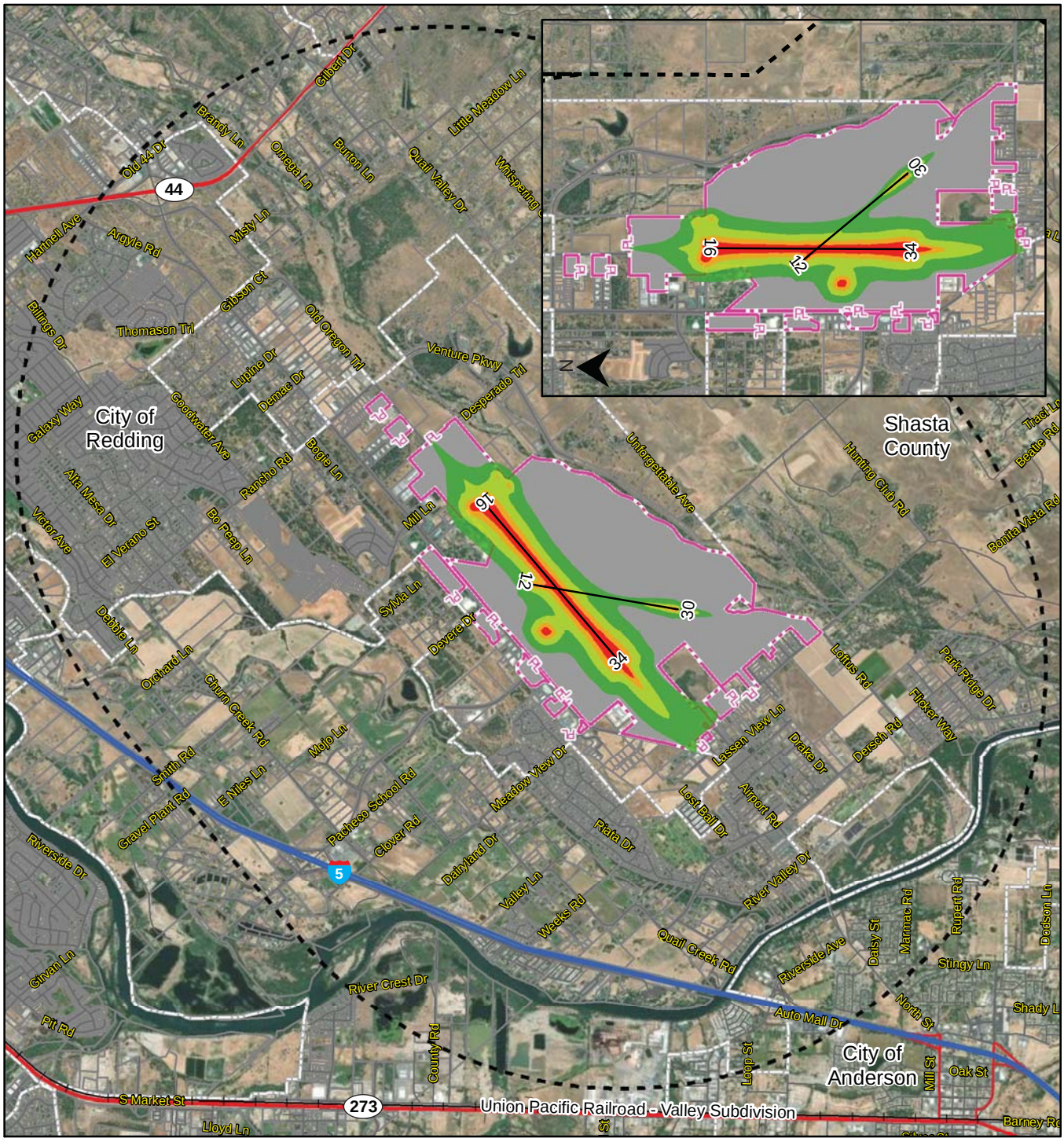
Future Safety Zones[2]

1. Runway Protection Zone[3]
2. Inner Approach/Depature Zone
3. Inner Turning Zone
4. Outer Apporach/Departure Zone
5. Sideline Zone
6. Traffic Pattern Zone
7. Part 77 Conical Surface[1]

N

0 5,000 10,000

1" = 5,000'



Legend

- Airport Property Boundary
- Existing Runway
- Airport Influence Area (AIA)[2]
- Railroad
- Municipal Boundaries[1]
- Parcels
- Interstate
- Highway
- Roads

Existing 2022 Noise Contour

- 60 CNEL
- 65 CNEL
- 70 CNEL
- 75 CNEL

CNEL = Community Noise Equivalent Level

N

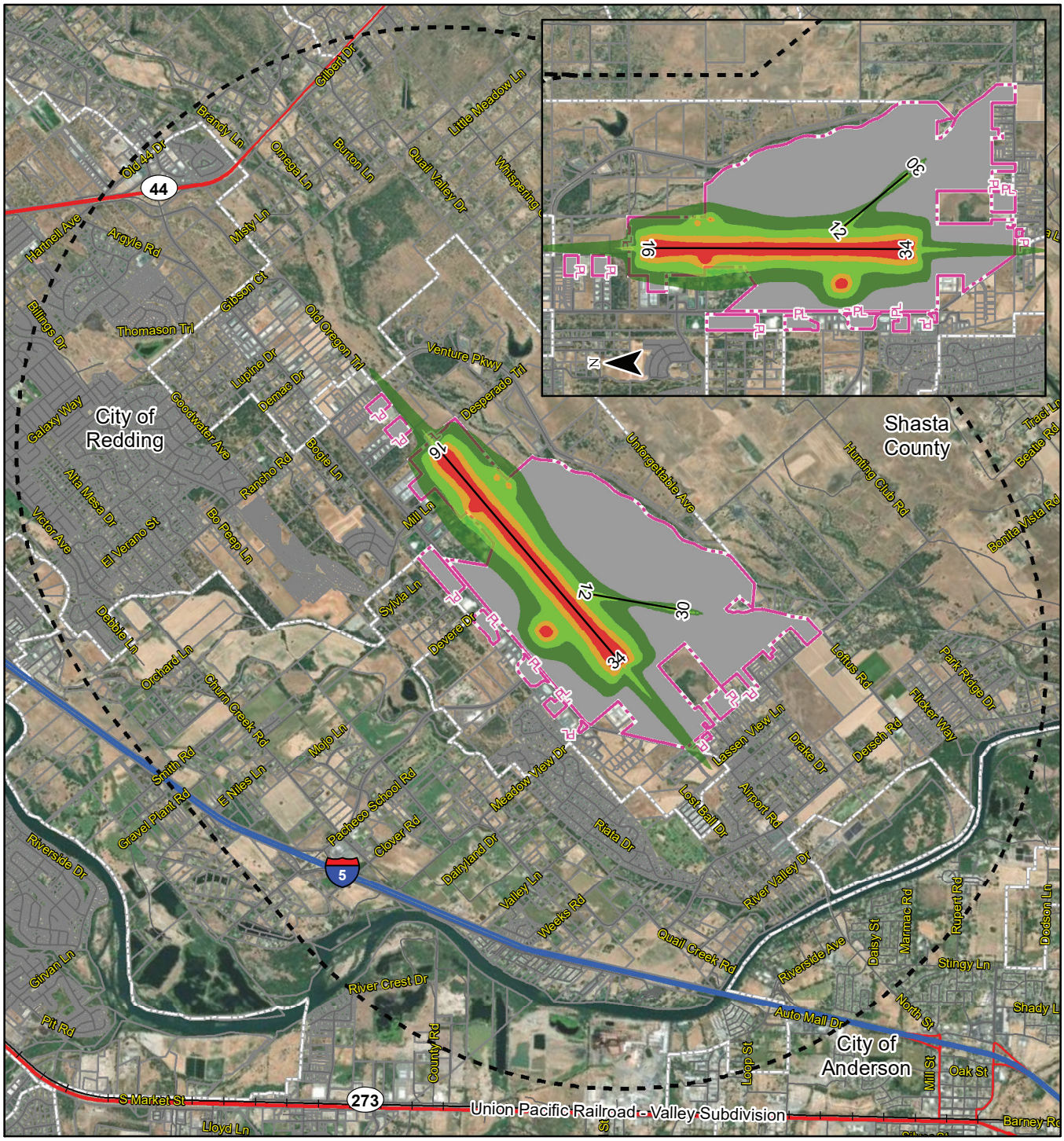
0 5,000 10,000

1" = 5,000'

[1]City of Redding GIS Portal
[2]Part 77 Conical Surface

Sources: ESRI Basemap Imagery (2023), City of Redding, Shasta County Roads, Coffman Associates Analysis

Exhibit 2B
EXISTING (2022) NOISE CONTOURS



Legend

- Airport Influence Area (AIA)[2]
- Airport Property Boundary
- Railroad
- Interstate
- Highway
- Municipal Boundaries[1]
- Roads
- Parcels

Future 2042 Noise Contour

- 60 CNEL
- 65 CNEL
- 70 CNEL
- 75 CNEL

CNEL = Community Noise Equivalent Level

N

0 5,000 10,000

1" = 5,000'

[1]City of Redding GIS Portal
[2]Part 77 Conical Surface
[3]Redding Regional Airport Master Plan (2024)

Sources: ESRI Basemap Imagery (2023), City of Redding, Shasta County Roads, Coffman Associates Analysis

Exhibit 2C
FUTURE (2042) NOISE CONTOURS

2.1.2.1 Aircraft Operations and Fleet Mix

As outlined in Public Utilities Code (PUC) Section 21675(a), the noise contours included in an ALUCP must reflect the anticipated growth of the airport during at least the next 20 years. **Table 2A** summarizes existing and future operations for RDD using the master plan forecast and includes the types of aircraft used in the noise model. The FAA's Traffic Flow Management System Counts (TFMSC) database and RDD's based aircraft list were used to determine the types of aircraft that frequently use the airport. The AEDT provides aircraft noise data for many of the aircraft operating in the national fleet to accurately represent the noise conditions at the airport.

TABLE 2A | Aircraft Fleet Mix and Operations Forecast – Redding Regional Airport

Aircraft Type	AEDT Designator	Existing (2022)	Future (2042)
ITINERANT OPERATIONS			
Turbojet			
Cirrus Vision SF50	ECLIPSE500	112	284
Cessna Citation CJ3	CIT3	96	244
Bae 146-200	BAE146	8	20
Beechjet 400-T-1 (Military)	MU3001	26	67
Challenger 300/Bombardier CRJ-200	CL601	2,968	7,531
Cessna 500/Citation I/Cessna Citation V/Ultra/Encore	CNA55B	750	1,903
Bombardier CRJ-700/Citation Sovereign/Citation X	CRJ9-ER	308	782
Bombardier Learjet 35/36-45-55	LEAR35	150	381
Gulfstream IV & V	GV	82	208
Boeing 737-300, 400, 700, 800	737800	398	1,010
F-18 Hornet (Military)	F-18	28	71
Turbojet Subtotal:	**–**	**4,926**	**12,501**
Piston			
Single-Engine, Fixed	GASEPF	9,546	13,086
Single-Engine, Variable	GASEPV	9,545	13,086
Multi-Engine Piston	BEC58P	2,600	1,950
Piston Subtotal:	**–**	**21,692**	**28,122**
Turboprop			
Cessna 208 Caravan	CNA208	2,518	3,718
Beech King Air 90	1900D	2,996	4,424
Bombardier Q-400	DHC830	734	1,084
Pilatus PC-12	Pilatus PC-12	482	712
Short 330	SD330	50	74
C-130 Hercules (Military)	C130E	94	138
Turboprop Subtotal:	**–**	**6,874**	**10,150**
Helicopter			
Bell UH-1H Super Huey	B206L	1,650	2,350
Sikorsky S70i	S70	1,650	2,350
Robinson R22, R44 & R66	R44	1,650	2,350
Eurocopter EC130	EC130	1,650	2,350
Helicopter Subtotal:	**–**	**6,600**	**9,400**
ITINERANT OPERATIONS SUBTOTAL:	**–**	**40,091**	**60,173**
LOCAL OPERATIONS			
Single-Engine Fixed Pitch Propeller	GASEPF	10,448	15,824
Single-Engine Variable Pitch Propeller	GASEPV	10,448	15,824
Multi-Engine Piston	BEC58P	400	250
Helicopter	R44	1,000	1,800
LOCAL OPERATIONS SUBTOTAL:	**–**	**22,296**	**33,698**
GRAND TOTAL:	**–**	**62,387**	**93,871**

Sources: Redding Municipal Airport Master Plan Forecast, 2023; FAA TFMSC; Coffman Associates analysis

The selection of individual aircraft types is important to the modeling process because different aircraft types generate different noise levels. The aircraft fleet mix for Redding Regional Airport is derived from the airport's most recent master plan forecast, which was approved by the FAA on August 29, 2023. **Table 2A** summarizes the generalized fleet mix data input into the noise analysis.

A variety of general aviation single-engine fixed-propeller aircraft are modeled with the GASEPV and GASEPF aircraft in the AEDT. The GASEPV represents many single-engine general aviation aircraft, including the Mooney M-20, Cessna 172 and 180, Piper Cherokee Arrow, and Air Tractor AT-502 and AT-802. The general aviation single-engine fixed-pitch propeller model, the GASEPF, also represents several single-engine general aviation aircraft. These include the Cessna 150, Piper Archer, and Piper Tomahawk.

The CNA208 designator represents single-engine turboprop aircraft, including the Cessna Caravan and Beech Bonanza 36. The Beech Baron (BEC58P) represents light twin-engine aircraft, such as the Beech 50 and 55; Piper PA-23, PA-30, and PA-34; and Cessna 304, 310, and 401.

Time-of-Day

The time of day at which aircraft operations occur is important as input to the AEDT due to the 10-decibel (dB) nighttime (10:00 p.m. to 7:00 a.m.) and 4.8-dB evening (7:00 p.m. to 10:00 p.m.) weighting of flights.

While Redding Regional Airport has an airport traffic control tower (ATCT), it is closed daily between 9:30 p.m. and 6:30 a.m. Consolidated commercial flight schedules were used to estimate evening and nighttime operations for scheduled service aircraft. Specific counts for evening and nighttime general aviation activity were based on estimates from previous noise studies. The resulting estimates of 3.0 percent of operations occurring at night and 7.0 percent of operations occurring during the evening were used as inputs for modeling both the existing and future conditions.

Runway Use

Runway usage data also comprise an essential component for developing noise exposure contours in the AEDT. Local wind data can be used as a general guideline for determining runway use percentages; however, local wind data provide only the directional availability of a runway and do not consider pilot selection, primary runway operations, or local operating conventions. Continuous runway use records are not maintained at Redding Regional Airport. The runway use distribution at RDD is based on estimates from previous noise studies. **Table 2B** summarizes the runway use percentages for the existing and future conditions.

Three helipad locations were also used to model helicopter operations.

TABLE 2B | Runway Use Percentages – Redding Regional Airport

	COMMERCIAL/LARGE AIRCRAFT		GENERAL AVIATION	
Runway End	Departures	Arrivals	Departures	Arrivals
16	40%	40%	40%	40%
34	60%	60%	50%	50%
12	–	–	5%	5%
30	–	–	5%	5%

Flight Tracks

A review of local flight procedures was used to develop consolidated flight tracks for use in the AEDT. As discussed below, all runway ends use a standard left-hand traffic pattern. Accordingly, it is assumed that touch-and-go traffic occurs to the west of the airport for Runway 16-34 and to the northeast of the airport for Runway 12-30.

Flight Profiles

The standard arrival profile used in the AEDT program is a three-degree approach. No indication has been given by airport staff of any variation on this standard procedure for civilian aircraft; therefore, the standard approach is included in the model as representative of local operating conditions.

The AEDT computes separate departure profiles (altitude at a specified distance from the airport with associated velocity and thrust settings) for each of the various types of aircraft using the airport.

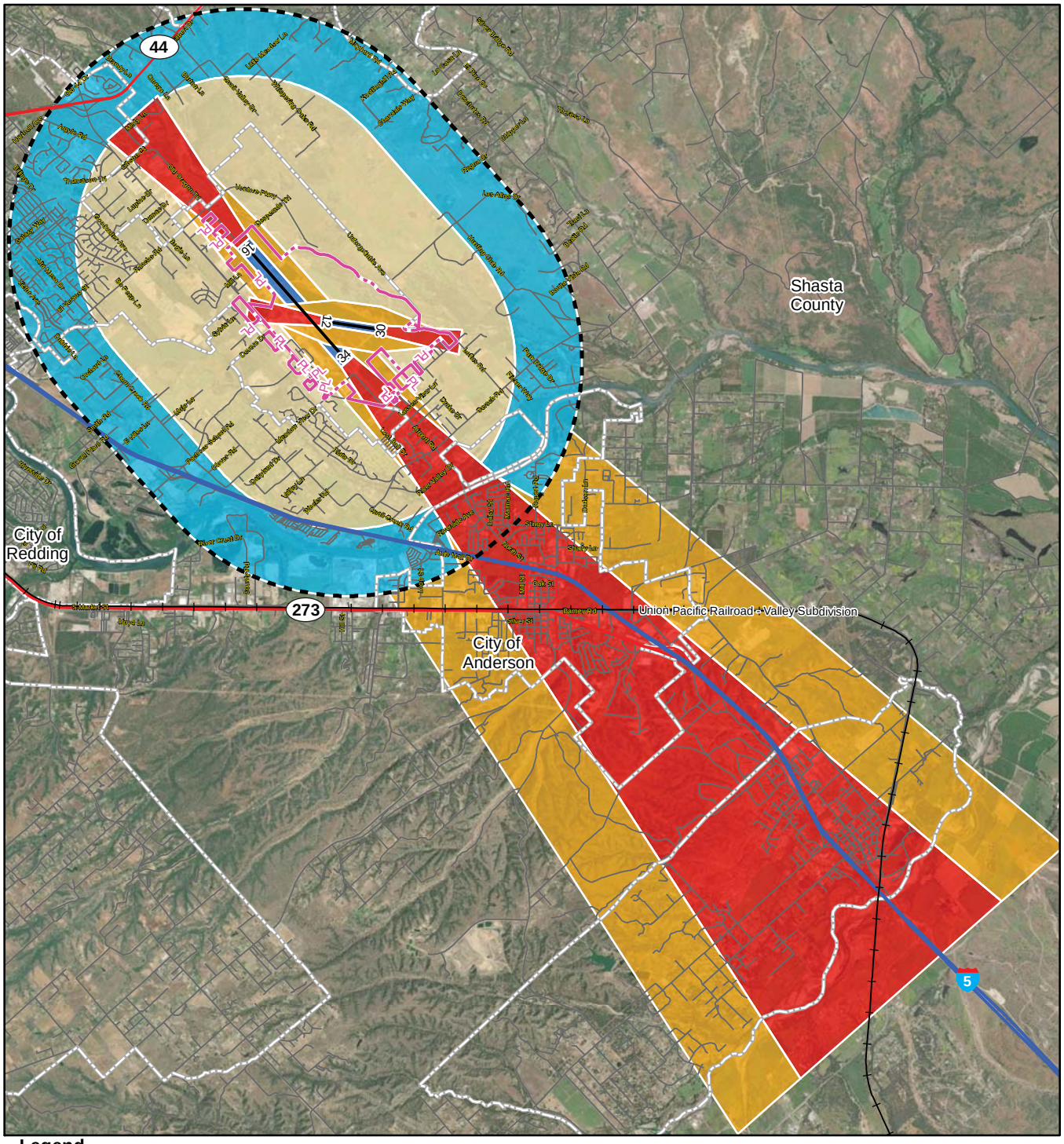
2.1.3 Airspace and Overflight

Exhibit 2D depicts the airspace plan, updated for the current plan. This exhibit includes the 14 CFR Part 77 conical surface, which is also the AIA for Redding Regional Airport.

2.2 AIRPORT INFORMATION

2.2.1 Airport Facilities

Airport facilities are detailed in **Table 2C**. **Exhibit 2E** shows the current ALP. The airport has two runways: Runway 16-34 (primary), which is 7,003 feet long and 150 feet wide, and Runway 12-13 (additional), which is 5,067 feet long and 150 feet wide. The runways are made of asphalt and are in good condition. Both runways have standard left-hand traffic patterns. The runway weight-bearing strength for a single-wheel aircraft is 17,000 pounds, which is the maximum weight the runway can withstand. There are non-precision runway markings that are in good condition, as well as medium intensity runway lighting (MIRL), runway end identifier lights (REILs), and an unlighted touchdown point. Runway 12 has a two-light precision approach path indicator (PAPI-2) on the left at a three-degree glide angle, and Runway 30 has a four-light PAPI (PAPI-4) on the right at a three-degree glide angle.



Legend

- Airport Property Boundary
- Ultimate Runway Centerline[2]
- Airport Influence Area (AIA)[1]
- Railroad
- Municipal Boundaries[3]
- Interstate
- Highway
- Roads

Ultimate Part 77 Surfaces

- Approach
- Primary
- Transitional
- Horizontal
- Conical

N

0 9,000 18,000

1" = 5,000'

[1]Part 77 Conical Surface
[2]Development Concept (2024)
[3]City of Redding GIS Portal

Sources: ESRI Basemap Imagery (2023), City of Redding, Shasta County Roads, Coffman Associates Analysis

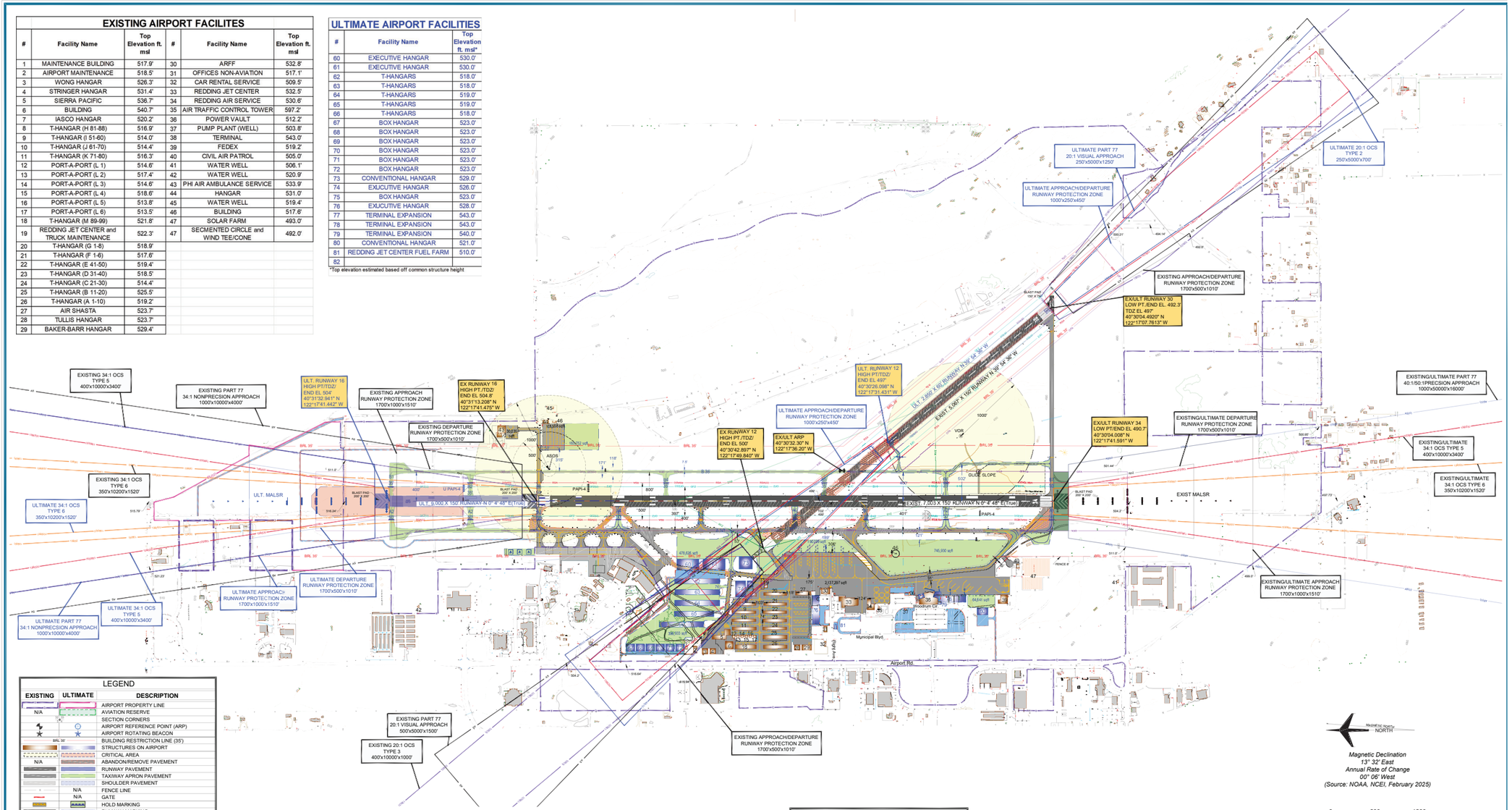
EXISTING AIRPORT FACILITES

#	Facility Name	Top Elevation ft. msl	#	Facility Name	Top Elevation ft. msl
1	MAINTENANCE BUILDING	517.9'	30	ARFF	532.8'
2	AIRPORT MAINTENANCE	518.5'	31	OFFICES NON-AVIATION	517.1'
3	WONG HANGAR	526.3'	32	CAR RENTAL SERVICE	509.5'
4	STRINGER HANGAR	531.4'	33	REDDING JET CENTER	532.5'
5	SIERRA PACIFIC	536.7'	34	REDDING AIR SERVICE	530.6'
6	BUILDING	540.7'	35	AIR TRAFFIC CONTROL TOWER	597.2'
7	IASCO HANGAR	520.2'	36	POWER VAULT	512.2'
8	T-HANGAR (H 81-88)	516.9'	37	PUMP PLANT (WELL)	503.8'
9	T-HANGAR (I 51-60)	514.0'	38	TERMINAL	543.0'
10	T-HANGAR (J 61-70)	514.4'	39	FEDEX	519.2'
11	T-HANGAR (K 71-80)	516.3'	40	CIVIL AIR PATROL	505.0'
12	PORT-A-PORT (L 1)	514.6'	41	WATER WELL	506.1'
13	PORT-A-PORT (L 2)	517.4'	42	WATER WELL	520.9'
14	PORT-A-PORT (L 3)	514.6'	43	PHI AIR AMBULANCE SERVICE	533.9'
15	PORT-A-PORT (L 4)	518.6'	44	HANGAR	531.0'
16	PORT-A-PORT (L 5)	513.8'	45	WATER WELL	519.4'
17	PORT-A-PORT (L 6)	513.5'	46	BUILDING	517.6'
18	T-HANGAR (M 89-99)	521.8'	47	SOLAR FARM	493.0'
19	REDDING JET CENTER and TRUCK MAINTENANCE	522.3'	47	SECMENTED CIRCLE and WIND TEE/CONE	492.0'
20	T-HANGAR (G 1-8)	518.9'			
21	T-HANGAR (F 1-6)	517.6'			
22	T-HANGAR (E 41-50)	519.4'			
23	T-HANGAR (D 31-40)	518.5'			
24	T-HANGAR (C 21-30)	514.4'			
25	T-HANGAR (B 11-20)	525.5'			
26	T-HANGAR (A 1-10)	519.2'			
27	AIR SHASTA	523.7'			
28	TULLIS HANGAR	523.7'			
29	BAKER-BARR HANGAR	529.4'			

ULTIMATE AIRPORT FACILITIES

#	Facility Name	Top Elevation ft. msl*
60	EXECUTIVE HANGAR	530.0'
61	EXECUTIVE HANGAR	530.0'
62	T-HANGARS	518.0'
63	T-HANGARS	518.0'
64	T-HANGARS	519.0'
65	T-HANGARS	519.0'
66	T-HANGARS	518.0'
67	BOX HANGAR	523.0'
68	BOX HANGAR	523.0'
69	BOX HANGAR	523.0'
70	BOX HANGAR	523.0'
71	BOX HANGAR	523.0'
72	BOX HANGAR	523.0'
73	CONVENTIONAL HANGAR	529.0'
74	EXUCUTIVE HANGAR	526.0'
75	BOX HANGAR	523.0'
76	EXUCUTIVE HANGAR	528.0'
77	TERMINAL EXPANSION	543.0'
78	TERMINAL EXPANSION	543.0'
79	TERMINAL EXPANSION	540.0'
80	CONVENTIONAL HANGAR	521.0'
81	REDDING JET CENTER FUEL FARM	510.0'
82		

*Top elevation estimated based off common structure height



LEGEND

EXISTING	ULTIMATE	DESCRIPTION
		AIRPORT PROPERTY LINE
N/A		AVIATION RESERVE
		SECTION CORNERS
		AIRPORT REFERENCE POINT (ARP)
		AIRPORT ROTATING BEACON
BRL 35'		BUILDING RESTRICTION LINE (35')
		STRUCTURES ON AIRPORT
		CRITICAL AREA
N/A		ABANDON/REMOVE PAVEMENT
		RUNWAY PAVEMENT
		TAXIWAY APRON PAVEMENT
		SHOULDER PAVEMENT
N/A		FENCE LINE
N/A		GATE
		HOLD MARKING
		RUNWAY MARKING
		TAXIWAY APRON MARKING
		ROADS AND PARKING PAVEMENT
DESIGNATION		SURVEY MONUMENT WITH IDENTIFIER
OFA	OFA(U)	OBJECT FREE AREA
RSA	RSA(U)	RUNWAY SAFETY AREA
OFZ	OFZ(U)	OBSTACLE FREE ZONE
SAME		PRECISION OBSTACLE FREE ZONE
RPZ	RPZ(U)	RUNWAY PROTECTION ZONE
RVZ	RVZ(U)	RUNWAY VISIBILITY ZONE
TOFA	TOFA (U)	TAXIWAY OBJECT FREE AREA
TSA	TSA (U)	TAXIWAY SAFETY AREA
		PAPI-4
		RUNWAY END IDENTIFIER LIGHTS (REIL)
		TIE-DOWNS
		WINDSOCK
		LOCALIZER
		THRESHOLD LIGHTS
ASDE	RSDE	PT77 APPROACH SURFACE
20:1	20:1(U)	13B 2 APPROACH
20:1	20:1(U)	13B 3 APPROACH
20:1	20:1(U)	13B 5 APPROACH
20:1	20:1(U)	13B 6 APPROACH
		TREELINE
3600		TOPOGRAPHIC CONTOURS
		DRAINAGE

GENERAL NOTES:

1. Survey data provided by Martinez Geospatial - Survey Date: 09/22/2022.
2. Road traverse point elevations include height adjustment.
3. Certain types of development and/or vegetation within the ASOS Critical Area may hamper instrument functionality. Refer to FAA Order 6560.20C for the desired ASOS obstruction clearance standards and FAA Order 6820.10 for the desired clearance standards.
4. No published Primary Airport Control points (PAC) or Secondary Airport Control (SAC) points for RDD.
5. Details concerning terminal improvements are depicted on sheet 14-15.
6. Recommended Land Uses within the airport environs are depicted on sheet 16.
7. Multiple "Through the Fence" access exists on the United States Forest Service (USFS) ramp.
8. Future Hangars in the RPZ of Runway 12will not be built until Runway 12 is shortened.

SIGNATURES

FEDERAL AVIATION ADMINISTRATION
Western Pacific Region

Approved - Subject to Conditions in the Letter of Conditional Approval Included in this Electronic ALP

Western Pacific Region
Airport District Office

SPONSOR APPROVAL

Airport Director
Redding Regional Airport

Magnetic Declination
13° 32' East
Annual Rate of Change
00° 06' West
(Source: NOAA, NCEI, February 2025)

0 600 1200
SCALE IN FEET

DRAFT

NO.	REVISIONS	DATE	BY	APP'D.

"THE PREPARATION OF THESE DOCUMENTS WAS FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL AVIATION ADMINISTRATION AS PROVIDED UNDER SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982, AS AMENDED. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THESE DOCUMENTS BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED HEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS."

REDDING REGIONAL AIRPORT

AIRPORT LAYOUT DRAWING

REDDING, CALIFORNIA

PLANNED BY: P. Taylor
DETAILED BY: M. Beaver
APPROVED BY: M. Quick

April 2025 SHEET 3 OF 18

Coffman Associates
Airport Consultants
www.coffmanassociates.com

Coffman Associates C:\Users\maggie\Coffman Associates Inc\Coffman - rg_CAD\AIRPORT\RDD_Redding_23\ALP\03 RDD ALD.dwg Printed Date: 4-24-25 01:14:19 PM maggie

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TABLE 2C | Airside Facilities Data – Redding Regional Airport

RUNWAYS		
Field Elevation: 505' Above Sea Level	**Runway 16-34**	**Runway 12-30**
Runway Length (feet)	7,003'	5,067'
Runway Width (feet)	150'	150'
Runway Surface Material	Asphalt	Asphalt
Condition	Good	Good
Pavement Markings	Precision/Good	Non-Precision/Good
Runway Weight-Bearing Capacity		
Single Wheel Weight-Bearing Capacity	98,000 lbs	60,000 lbs
Dual Wheel Weight-Bearing Capacity	128,000 lbs	72,000 lbs
Dual Tandem Wheel Weight-Bearing Capacity	195,000 lbs	110,000 lbs
Lighting and Navigation		
Runway Lighting	HIRL	MIRL
Runway End Identifier Lights (REILs)	Yes (16)	N/A
Approach Lighting System	MALSR (34)	N/A
Taxiway Lighting	CTAF	CTAF
Approach Aids	PAPI-4L (Both Ends)	PAPI-2L
Instrument Approach Procedures	LOC BC – 16	N/A
	ILS – 34	
	RNAV (GPS) – 16 & 34	
	VOR – 34	
Weather or Navigational Aids	Airport Beacon	Redding Ground ATCT – 121.7 Mhz (6:30am-9:30pm daily)
	Lighted Wind Cones (4)	Automated Terminal Information System (ATIS) – 124.1 Mhz
	Wind Tee	Common Traffic Advisory Frequency (CTAF) – 119.8 Mhz
	Segmented Circle	Universal Communication Frequency (UNICOM) – 122.95 Mhz
	Automated Surface Observation System (ASOS) – 530-221-7144	Remote Communications Outlet – 122.1R Mhz/108.4T (Rancho Murieta Radio)
	Airport Traffic Control Tower (ATCT) – 119.8 Mhz (6:30am-9:30pm daily)	

Key:
ILS = instrument landing system
RNAV = area navigation (GPS variant)
ODALS = omnidirectional approach lighting system
MALSR = medium intensity approach lighting system with runway alignment indicator lights
REIL = runway end identifier lights
CTAF = common traffic advisory frequency
VOR = very high frequency omnidirectional range
PAPI = precision approach path indicator
RLSS = runway lead-in lights
HIRL = high intensity runway lights
MIRL = medium intensity runway lights
N/A = not applicable

Sources: Airport/Facility Directory – Southwest U.S. (effective Sept. 8, 2022); Airport records

2.2.2 Future Airport Plans

At the time of this study, Redding Regional Airport is undergoing an update to its master plan, which will likely include facility and infrastructure updates and enhancements. The *Redding Regional Airport Master Plan* documents facility improvement plans for the course of the planning period. As previously discussed, the development concept contemplates the potential closure of Runway 12-30 and extension of Runway 16-34 by 1,997 feet. Other plans related to the runway extension on Runway 16 include acquisition of 32.0 acres within the future RPZ, rerouting of the airport service road around the future runway end,

relocation of the existing localizer, and addition of a medium intensity approach lighting system with runway alignment indicator light (MALSR). Additional planned developments around the airfield include hangar complexes to the west that include units of varying sizes; the addition of an overnight parking apron; three new helipads; and various taxiway reconfigurations.

2.3 LAND USE

Redding Regional Airport is situated in the southeast corner of the City of Redding, approximately six miles from the central business district. The airport is bordered with Shasta County land to the east, south, and west. The City of Anderson is approximately two miles to the south of the airport.

2.3.1 Existing Land Uses

The airport is surrounded by a wide range of land uses within the City of Redding and unincorporated Shasta County. Within the City of Redding, the existing land uses surrounding the airport are limited to industrial, commercial, and open space uses.

2.3.2 Zoning

Exhibit 2F illustrates existing zoning for parcels within the study area.

The State of California gives local jurisdictions, such as cities and counties, the authority to regulate the use of buildings, structures, and land through the adoption and administration of zoning ordinances. The City of Redding's current zoning ordinance designates the area surrounding the airport as Open Space (OS) to the east, Heavy Industrial (HI) to the south, and General Industrial (GI) to the east, except for two areas designated as General Commercial (GC) to the west at the intersections of Airport Road and Knighton Road, and Airport Road and Meadow View Drive.

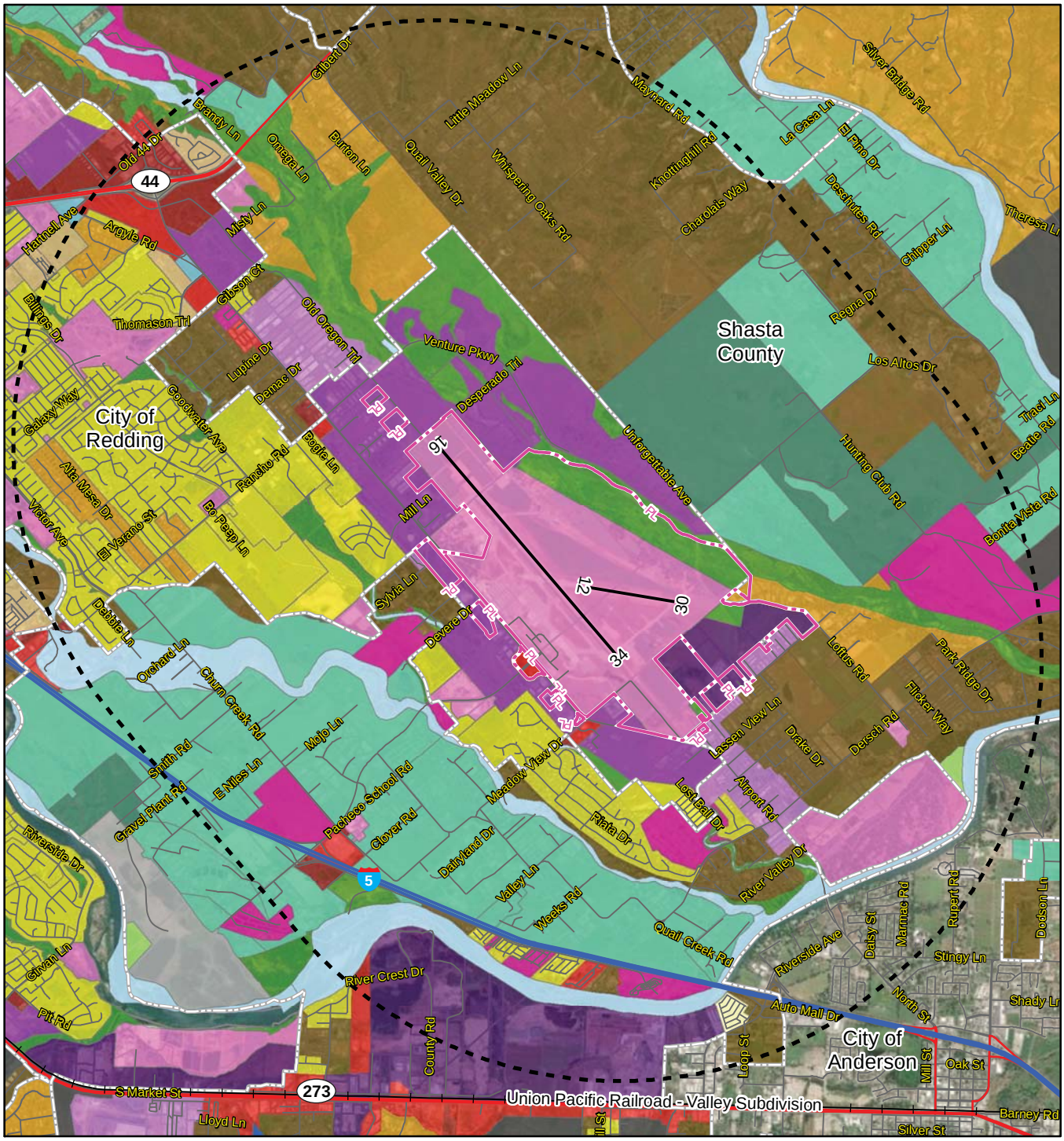
2.3.3 General Plan

Exhibit 2G illustrates the planned land uses for the areas surrounding Redding Regional Airport in the future.

The City of Redding's most recent diagram of planned land uses for the city was adopted in March 2024 as part of *General Plan 2045*. According to the diagram, the predominant land uses surrounding the airport are General Industrial (GI) or Heavy Industrial (HI), except for a designated greenway to the east and two areas designated General Commercial (GC) to the west.

2.4 COMPATIBILITY FACTORS

Exhibit 2H is a compatibility factors map that compiles National Transportation Safety Board (NTSB) flight accident data for all airports in the United States. NTSP accident locations do not represent specific events at this airport. The exhibit also depicts arrival and departure flight tracks used to generate the noise exposure contours. The purpose of this exhibit is to illustrate the methodology behind the shapes and sizes of the safety, noise, and airspace compatibility zones.



Legend

- Airport Property Boundary
- Ultimate Runway Centerline[4]
- Airport Influence Area (AIA)[2]
- Railroad
- Municipal Boundaries[3]
- Interstate
- Highway
- Roads
- Parcels

Zoning[3]

- Heavy/Cmmunity Commercial
- HIghway/General Commerical
- Heavy Industrial
- General/Light Industrial
- Public Facility
- General Office
- Open Space
- Residential Single Family 2 - 4 Unit Per Acre
- Residential Multiple-Family 6 - 20 Unit Per Acre
- Limited/Residential Estate 1 - 2 Unit Per Acre
- Rural Land 2 - 5 Unit Per Acre
- Planned Development
- Mixed Use
- Mobile Home Park
- Exclusive Agricultural
- Limited Agriculture
- Designated Floodway
- Habitat Protection
- Mineral Resource
- Unclassified

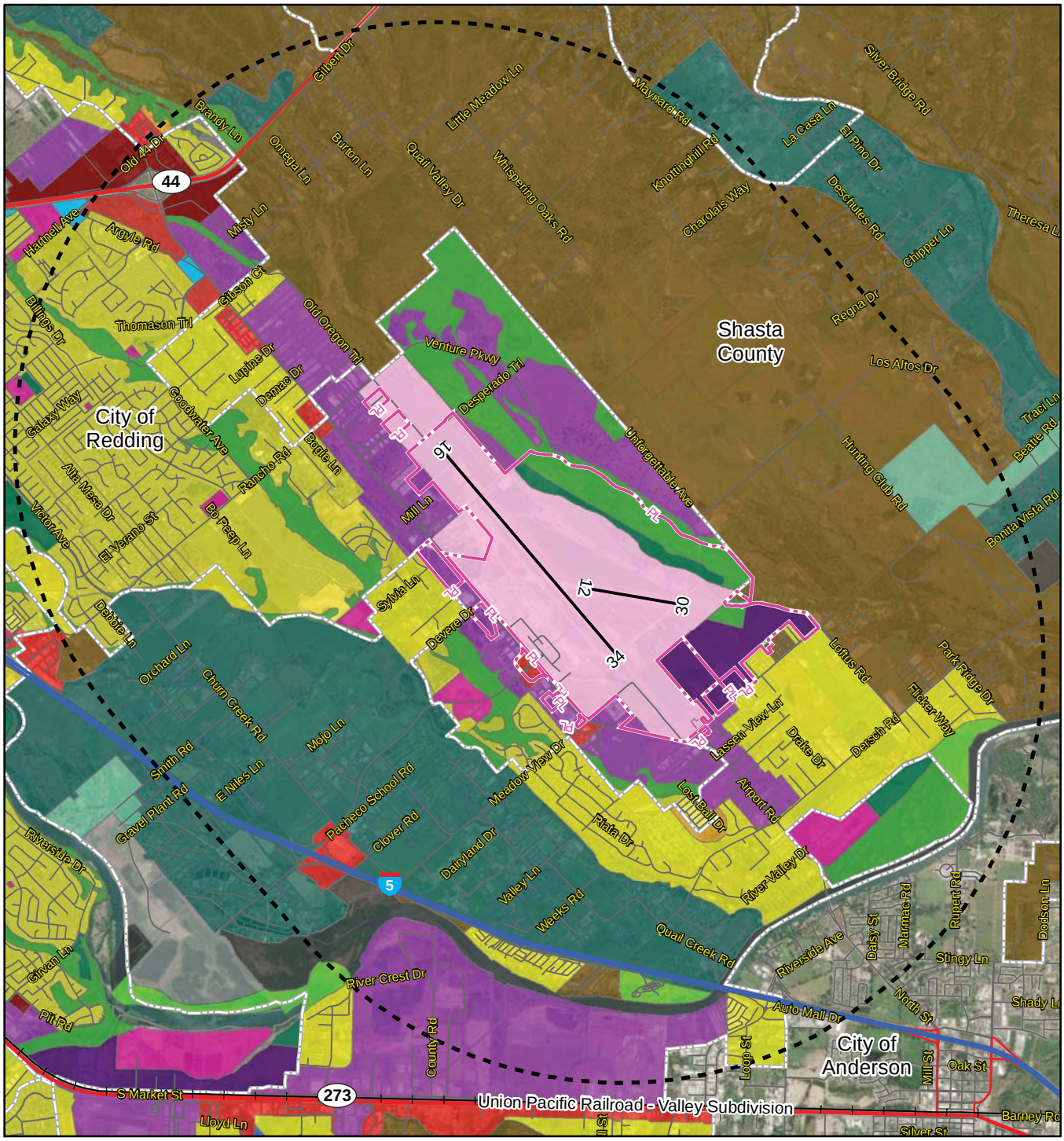
N

0 5,000 10,000

1" = 5,000'

[1]United States Census Bureau (2023)
[2]Part 77 Conical Surface
[3]City of Redding ArcGIS Open Data Portal (2023), Shasta County ArcGIS Open Data Portal (2023)
[4]Redding Regional Airport Master Plan (2024)

Sources: ESRI Basemap Imagery (2023), City of Redding, Shasta County Roads, Coffman Associates Analysis



Legend

- Airport Property Boundary
- Ultimate Runway Centerline[3]
- Airport Influence Area (AIA)[2]
- Railroad
- Municipal Boundaries[2]
- Interstate
- Highway
- Roads
- Parcels

General Plan[3]

- Commercial
- Industrial
- Mixed Use
- Public Land
- Existing/Suburban Residential
- Urban Residential
- Rural Residential
- Open Space
- Habitat Resource 40 acre density
- Mineral Resource
- Agricultural Small Scale Cropland / Grazing
- Agricultural Croplands
- Heavy Commercial
- Heavy Industrial
- Airport Services
- Public Facilities/Shopping Center
- General/Limited Office
- Greenway
- Parks

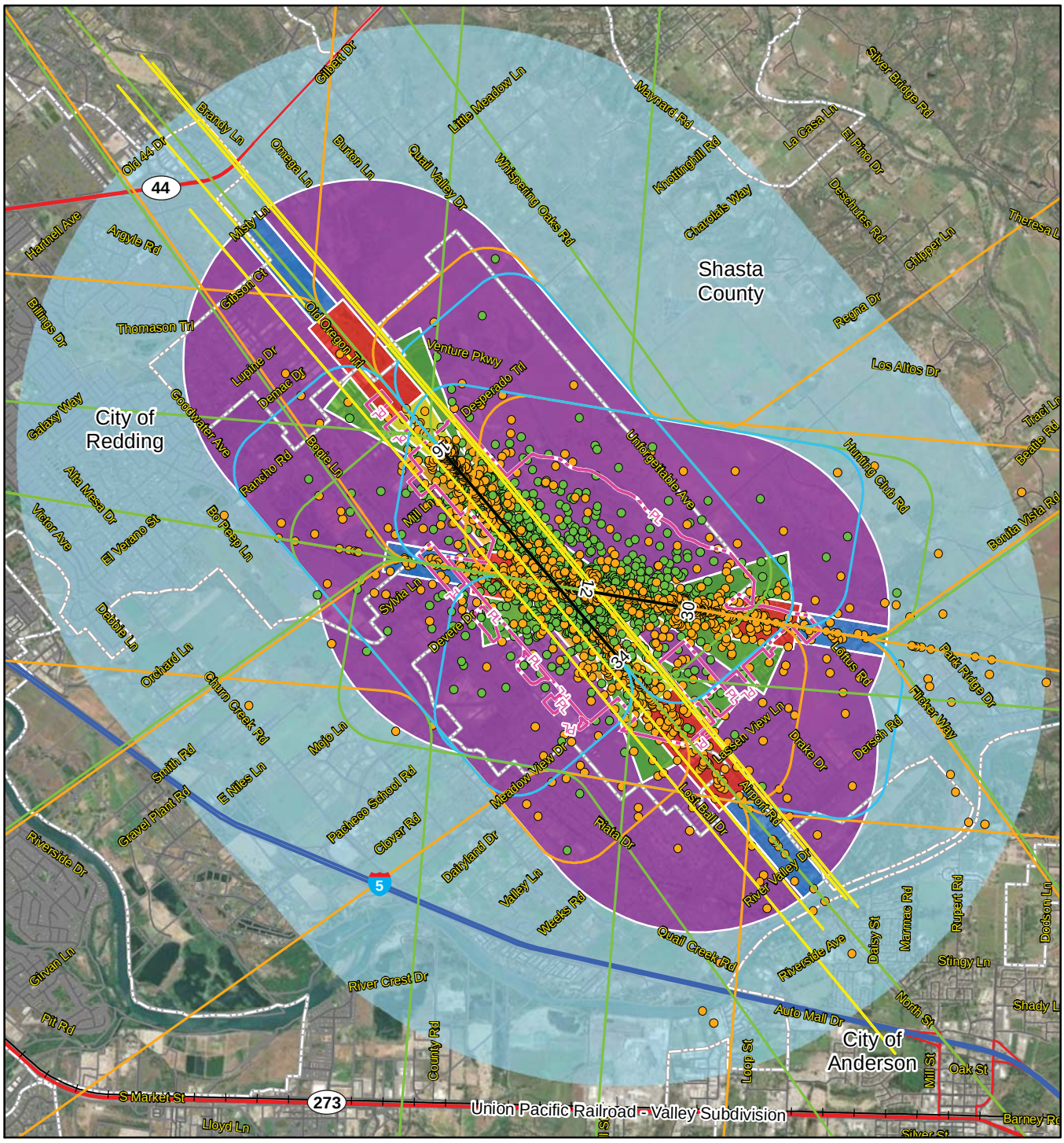
N

0 5,000 10,000

1" = 5,000'

[1]Part 77 Conical Surface
[2]City of Redding ArcGIS Open Data Portal (2024), Shasta County ArcGIS Open Data Portal (2023)
[3]Redding Regional Airport Master Plan (2024)

Sources: ESRI Basemap Imagery (2023), City of Redding, Shasta County Roads, Coffman Associates Analysis



Legend

- Airport Property Boundary
- Ultimate Runway Centerline[3]
- Railroad
- Municipal Boundaries[1]
- Interstate
- Highway
- Parcels
- Roads

Flight Tracks

- Approach
- Depparture
- Touch and Go
- Helicopter
- Arrivial Accident Points[5]
- Departure Accident Points[5]

Future Safety Zones[4]

- 1. Runway Protection Zone[3]
- 2. Inner Approach/Depature Zone
- 3. Inner Turning Zone
- 4. Outer Apporach/Departure Zone
- 5. Sideline Zone
- 6. Traffic Pattern Zone
- 7. Part 77 Conical Surface[2]

N

0 5,000 10,000

1" = 5,000'

[1]City of Redding GIS Portal
[2]Part 77 Conical Surface
[3]Redding Regional Airport Master Plan (2024)
[4]Figure 3A, California Airport Land Use Planning Handbook (2011), and Coffman Associates Analysis
[5]California Airport Land Use Planning Handbook (2011) normalized from airports in United States

Sources: ESRI Basemap Imagery (2023), City of Redding, Shasta County Roads, Coffman Associates Analysis

Chapter Three
IMPLEMENTATION AND DEFINITIONS

3.1 EFFECTIVE DATE

This airport land use compatibility plan (ALUCP) becomes effective on the date of its adoption by the Shasta County Airport Land Use Commission (ALUC) and supersedes the previous ALUCP. Following adoption of this plan, the previous plans shall not be used to make consistency determinations.

3.2 STATE REQUIREMENTS AND GUIDANCE

3.2.1 State ALUC Statute

In the development of ALUCPs, California state law requires the following:

- The Shasta County ALUC must prepare ALUCPs for all public-use and military airports in Shasta County.
- The California Department of Transportation (Caltrans) must provide guidance to ALUCs in preparing ALUCPs. The Caltrans Division of Aeronautics publishes the *California Airport Land Use Planning Handbook* (Handbook) to fulfill this responsibility.
- ALUCs must be guided by the information in the Handbook when preparing ALUCPs.
- An ALUC must base its ALUCP on a long-range airport master plan and/or airport layout plan (ALP) that reflects the anticipated growth of the airport for at least the next 20 years. In the absence of an FAA-approved ALP, the ALUC may use a signed ALP drawing with Caltrans concurrence of consistency with California Code of Regulations (CCR) Title 21, Section 3534.

In addition to agencies with land use regulatory authority (such as cities and counties), special districts, community college districts, and school districts are also subject to the requirements of the state ALUC statute.

3.2.2 California Airport Land Use Planning Guidelines

The latest edition of the Handbook was released in October 2011. The Handbook provides guidance on the delineation of airport compatibility factor boundaries, the policies that should apply within those areas, and the administration of ALUCPs. The policies and maps in this ALUCP take into account the guidance provided by the current edition of the Handbook.

3.3 LOCAL AGENCIES AND STAKEHOLDERS SUBJECT TO THIS ALUCP

Those affected the most directly by this ALUCP include three groups of stakeholders: the ALUC, local agencies, and project sponsors. The following bullets briefly describes these stakeholders and their roles in using or implementing this ALUCP.

- **The ALUC** refers to the Shasta County Airport Land Use Commission and its staff. The role of the ALUC is to fulfill its mandate to promote airport land use compatibility in the environs of Redding Regional Airport (RDD).
- **Local agency** refers to Shasta County and any municipality with land use regulatory and permitting authority. It also includes school districts, community college districts, and special districts. Local agencies must incorporate compatibility policies and standards into their land use plans and regulations or overrule the ALUCP, in whole or in part.
- **Project sponsor** refers to any person or entity with a legal interest in a property, including a local agency, landowner, or nonresidential tenant, that submits an application to a local agency for review of a project proposed on such property. Project sponsors must comply with the compatibility policies and standards of this ALUCP in designing and building projects.

3.3.1 Property Not Subject to this ALUCP

This ALUCP does not apply to any property owned by the United States government, the State of California, or any Native American tribe.

3.3.2 Limit of ALUC Authority Over Airport

Public Utilities Code (PUC) § 21674 provides that the ALUC has certain powers and duties, subject to the limitations upon its jurisdiction set forth in PUC § 21676. Those powers include, but are not limited to, reviewing the plans, regulations, and other actions of local agencies and airport operators, pursuant to Section 21676. PUC § 21674 states that the powers of the ALUC shall in no way be construed to give the commission jurisdiction over the operation of any airport.

Other potential impacts created by airports within their environs (e.g., air or water quality impacts, resource impacts, or surface traffic) are addressed by other federal and state laws and are not within the statutory authority for the ALUC to review.

3.4 EXEMPTIONS FROM ALUC REVIEW

3.4.1 Existing Land Uses

Under state law, an ALUC has no authority over existing land use. A land use project will be considered an existing land use when a vested right is obtained in any of the following ways:

- An approved and unexpired vesting tentative map (pursuant to California Government Code §66498.1)
- An executed and valid development agreement (pursuant to California Government Code §65866)
- Issuance of a valid building permit with substantial work performed and substantial liabilities incurred in good faith reliance on the permit

An extension of time, or a proposed modification to an existing land use project that the local agency has determined to be in substantial conformance with previous approvals, is not subject to consistency review, regardless of whether a consistency determination was previously made. If the proposed modification is determined by the local agency to not be in substantial conformance, it must be submitted for consistency review.

The determination of whether a land use plan, regulation, or project meets the criteria of an existing land use must be made by the ALUC (or the local agency post-ALUCP implementation).

3.4.2 Repair, Maintenance, and Modification

Repair and maintenance of existing buildings are compatible with this ALUCP and are not subject to consistency review. Modification of an existing nonconforming land use shall be permissible, provided that the modification does not increase the magnitude of the nonconformity when compared to **Table 3A**. The magnitude of nonconformity shall be measured by:

1. (For residential land uses) the number of dwelling units and size of the structure on the lot
2. (For nonresidential land uses) the size of the nonconforming use in terms of lot area and building floor area

Where bedrooms or sleeping rooms are added to residential uses that are nonconformant with the noise compatibility policies of this compatibility plan, those rooms must be sound-insulated to achieve an indoor noise level of Community Noise Equivalent Level (CNEL) 45 dB from exterior sources. In all cases, building modifications shall be subject to the noise compatibility and airspace protection policies of this compatibility plan.

3.4.3 Resumption of a Discontinued Use

A land use that has been discontinued for more than 24 months is not considered an existing use. A use may be reestablished prior to 24 months following initial discontinuance (as determined by the local agency) without being subject to consistency review.

Nonconforming uses may be rebuilt to a density (for residential uses, dwelling units per acre) or size (for nonresidential uses, building floor area) not exceeding that of the original construction; however, in all cases, reconstructed nonconforming uses shall comply with the noise compatibility and airspace protection policies of this compatibility plan.

3.4.4 Single-Family Residence Development Right

Notwithstanding any other policies of this ALUCP, construction of a single-family residence, including a second dwelling unit, is allowed on a legal lot of record if the following conditions are met:

1. The property is located outside Safety Zone 1 – Runway Protection Zone (RPZ)
2. The project is permitted by the local agency
3. The project is reviewed by the ALUC for consistency with this plan

3.5 GOVERNING ALUCP

Land use policy actions and development actions are subject to this compatibility plan, unless the circumstances defined below apply.

3.5.1 Development Actions with Previous Airport Land Use Commission Consistency Determinations

Proposed development actions determined to be consistent or conditionally consistent with the compatibility plan in effect at the time of ALUC project review do not require further review under this compatibility plan, unless the proposed development is within the airport influence area (AIA) and one or more of the following conditions occur:

1. An increase in the proposed residential density or nonresidential intensity that would exceed the limits in **Table 3A**
2. Alteration or reconstruction of a nonresidential use that expands a portion of the site or the floor area of the building, thereby increasing the maximum intensity limits (number of people per acre) or the floor area ratio to levels above existing
3. Addition of a land use that is incompatible with this ALUCP
4. A structure height increase that creates a hazard or obstruction, as determined by the FAA
5. Addition of a characteristic that would create a hazard to air navigation (e.g., glare, thermal plumes, wildlife attractants) or impact airport operations, as determined by the airport operator
6. A consistency determination that is not more than five years old

If any of these changes are proposed, the development action must be reviewed for consistency with this compatibility plan.

An ALUC consistency determination does not expire but is limited to the project plans and description submitted with its application, as reviewed by the ALUC.

A consistency determination is transferable to a modified project only if there are no changes as listed in any of the preceding bullets. Any change in these characteristics requires a new consistency determination. The previous consistency determination will be rescinded if the ALUC makes a new determination.

Once a land use plan is found to be consistent with this ALUCP, future land use projects within the plan area must be reviewed for consistency if the plan consisted of only generalized land use designations without project details (e.g., site layout, density/intensity, building heights) at the time of original review.

3.5.2 Development Actions in the Review Process Before the Effective Date of this Compatibility Plan

Any proposed development action within the AIA that has an application deemed complete by the ALUC per the California Government Code (§65943) prior to adoption of this compatibility plan will be evaluated by the ALUC under the previous ALUCP plans.

3.6 ALUC CONSISTENCY REVIEW AFTER ALUCP ADOPTION, PRIOR TO LOCAL AGENCY CONSISTENCY FINDINGS

This section describes the process for consistency determinations before a local agency amends its land use plans and/or regulations to be consistent with this ALUCP or overrules all or part of this ALUCP. **Exhibit 3A** depicts the ALUC review process for land use plans, regulations, and projects prior to local agency implementation or overruling of ALUC findings.

3.6.1 Consistency Determination Review Process

Local agencies must submit applications for consistency determinations to the ALUC for proposed land use plans, regulations, and projects, as required by this ALUCP. Proposed land use plans, regulations, and projects should be referred to the ALUC at the earliest reasonable point in time so the ALUC review can be duly considered by the local agency prior to formalizing its decision. Depending on the type of plan or project and the normal scheduling of meetings, ALUC review can be completed before, after, or concurrently with review by the planning commission (and other advisory bodies) but must be done before final action by the local agency.

The application must contain the information described in **Appendix A**. The procedures discussed in the following sections apply.

3.6.2 Review of Application for Completeness

ALUC staff will determine if the application for consistency determination from the local agency is complete and will notify the local agency of application completeness in writing within 30 calendar days after receipt of an application.

If the application for consistency determination is incomplete, ALUC staff will identify the information required to complete the application and will inform the local agency. If additional information is required, a new 30-calendar day review period begins after the additional information is received by ALUC staff.

If a written determination of completeness is not made by ALUC staff within 30 calendar days after receipt of an application for consistency determination, the application is considered complete.

3.6.3 Consistency Review Timeframe

The ALUC must respond to a local agency's request for consistency determination within 60 calendar days after the application is deemed complete by ALUC staff.

The 60-calendar-day review period may be extended if the local agency agrees in writing or verbally consents at an ALUC meeting.

If the ALUC fails to act within 60 calendar days, the proposed land use plan, regulation, or project is considered consistent with this ALUCP.

ALUC REVIEW BEFORE LOCAL AGENCY IMPLEMENTATION

PROJECT SPONSOR

Submits land use plans, regulations and projects to local agency for approval[1]

LOCAL AGENCY

Submits land use plans, regulations and projects to the ALUC for consistency determination

ALUC

Reviews land use plans, regulations and projects and makes consistency determination (with conditions, if required)

IF CONSISTENT

LOCAL AGENCY

Land use projects: local agency informs project sponsor of determination of consistency and issues permit(s) for consistent or conditionally consistent projects

OR

Land use plans and regulations: local agency adopts/approves the land use plans or regulations

IF NOT CONSISTENT

LOCAL AGENCY

Land use projects: local agency informs project sponsor of determination of inconsistency and denies the land use projects. The local agency has three options.

OR

Land use plans and regulations: local agency informs project sponsor of determination of inconsistency and denies land use plans or regulations. The local agency has three options.

- Local agency amends the project/plan/ regulation and resubmits to ALUC for consistency determination
- OR
- Local agency overrules the ALUC
- OR
- Project/plan/ regulation denied

STOP

PROJECT SPONSOR

Proceeds with the implementation of the land use plans and regulations, or the development of the land use projects

Note: 1. This includes land use plan amendments proposed by a project sponsor and rezones.
Source/Prepared by: Coffman Associates, Inc.

3.6.4 Public Notice

The ALUC will provide public notice before acting on any land use plan, regulation, or project under consideration. Approximately one week prior to the ALUC meeting, an annotated agenda and meeting package will be made available on the Shasta County Planning Division website at https://www.shastacounty.gov/planning/page/airport-land-use. ALUC staff will notify commissioners and all interested members of the public via email regarding the available meeting agenda.

3.6.5 Consistency Determination Result

The ALUC will notify the local agency in writing of its consistency determination. A proposed land use plan, regulation, or project is determined to be one of the following:

- **Consistent with all four compatibility factors in this ALUCP** – The local agency may proceed with its decision.
- **Conditionally consistent with this ALUCP** – Any specified conditions must correspond to the policies and standards of this ALUCP. Unless a condition specifies subsequent review by the ALUC, responsibility to ensure compliance with conditions rests with the local agency with permit approval authority.
- **Not consistent with this ALUCP** – The ALUC must explain the specific conflicts with ALUCP policies and standards. The local agency may not approve the proposed land use plan, regulation, or project, unless it overrules the ALUC's finding of inconsistency in accordance with applicable state law. (See Section 1.5.2.)

Exhibit 3B presents a flow diagram that summarizes the consistency determination review process.

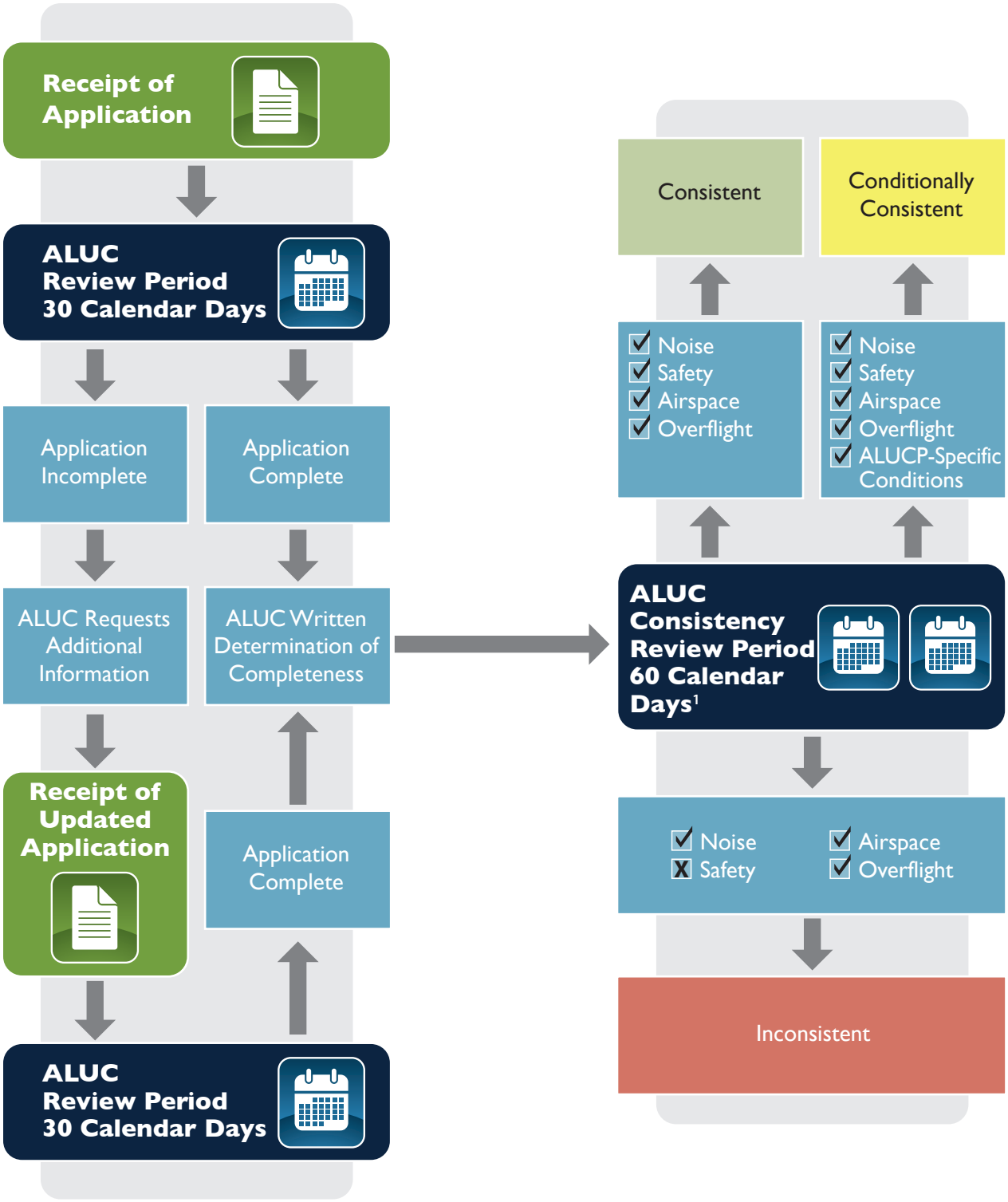
3.6.6 Findings as to Similar Uses

Cases may arise in which proposed development projects involve land uses that are not explicitly provided for by the land use criteria addressed in this chapter. In such cases, conventional rules of reason shall be applied in determining whether the subject land use is substantially similar to any land use specified in the plan criteria. In making these determinations, the reviewing officials shall consult the latest edition of the Handbook, prepared under the direction of Caltrans, as well as land use classification systems available through the American Planning Association and other authoritative sources. The ALUC shall make the final determination with respect to appropriate land use classification.

3.6.7 Properties Divided by Compatibility Zone Boundary

For the purpose of evaluating consistency with the compatibility criteria set forth in this ALUCP, any parcel larger than one acre that is split by compatibility zone boundaries shall be considered as if it were multiple parcels divided at the compatibility zone boundary line(s). Parcels less than one acre shall be evaluated for consistency based on the compatibility zone that covers the majority (more than 50 percent) of the parcel.

CONSISTENCY DETERMINATION REVIEW PROCESS



Note: 1. California Public Utilities Code §21676(d).
Source/Prepared by: Coffman Associates, Inc.

3.6.8 Land Use Compatibility Planning Coordination

An important purpose and function of the compatibility plan is to coordinate airport land use compatibility planning across jurisdictions. To further that purpose, Policies 3.6.8.1 through 3.6.8.3 shall apply.

3.6.8.1 Notification and Review of Proposed Land Use Policies

Any proposed land use policy action that affects property within the AIA must be referred to the ALUC for a determination of consistency. Local jurisdictions shall notify the ALUC of every such proposed land use policy action, as required by state law.

3.6.8.2 Notification to Airport Management of Proposed Land Use Policy Actions

The ALUC shall encourage local governments to inform airport operators of proposed land use policy actions within the Shasta County AIAs. This should be done in a manner and at a time that enables the ALUC and airport operators to concurrently review the proposed land use policy action.

3.6.8.3 Voluntary Advisory Review of Development Proposals

Local governments may submit proposals for development within the AIA to the ALUC for voluntary, non-binding advisory review. ALUC reviews are voluntary only if the jurisdiction's general plan and/or specific plan is fully consistent with the compatibility plan; ALUC review is mandatory if these plans are not consistent. The ALUC shall encourage local governments to submit the following types of proposals for development within the AIA for voluntary advisory review:

- Commercial or mixed-use development of more than 100,000 square feet of gross building area
- Residential or mixed-use development that includes more than 50 dwelling units
- Public or private schools
- Hospitals or other inpatient medical care facilities
- Libraries
- Places of public assembly
- Towers

When an ALUC review is advisory, the local jurisdiction does not need to take the special steps necessary to overrule the ALUC if it disagrees with the outcome of a review.

3.7 LOCAL AGENCY IMPLEMENTATION

3.7.1 Local Agency Requirements and Responsibilities

Within 180 calendar days of the ALUC's adoption or amendment of this ALUCP, each local agency affected by this ALUCP must:

1. Amend its land use plans and regulations to be consistent with this ALUCP, if needed; or
2. Overrule this ALUCP by a two-thirds vote of its governing body after adopting findings that justify the overrule and providing notice, as required by law. (See Section 1.5.2.)

If a local agency fails to take either action, it must follow the review process detailed in **Section 3.6**.

PUC § 21676.5 provides: If the ALUC finds that a local agency has not revised its general plan or specific plan or overruled the commission by a two-thirds vote of its governing body after making specific findings that the proposed action is consistent with the purposes of the *Aeronautics Act*, as stated in PUC Section 21670, the ALUC may require that the local agency submit all subsequent actions, regulations, and permits to the ALUC for review until the local agency's general plan or specific plan is revised or the specific findings are made, pursuant to PUC Section 21676.5

3.7.2 Establishing Consistency of Local Agency Land Use Plans and Regulations

To establish consistency of land use plans and regulations with this ALUCP, local agencies must eliminate conflicts, including the following:

- Land use plans or zoning designations that permit incompatible uses within noise contours or safety zones
- Permissible residential densities and nonresidential intensities that exceed this ALUCP's density and intensity limits in any safety zone
- Permissible heights that would either constitute a hazard, as determined by the FAA, or penetrate the Title 14 Code of Federal Regulations (CFR) Part 77 surfaces

Land use designations in local agency land use plans that reflect existing land uses do not render the local agency plans inconsistent with this ALUCP; however, local agencies must limit the expansion and reconstruction of existing land uses that are not consistent with this ALUCP, in accordance with the existing incompatible land use policies and standards of this ALUCP.

3.7.3 Ensuring Long-Term Compliance with this ALUCP

Local agency land use plans and regulations must include provisions for long-term compliance with this ALUCP. Local agencies must define the process they will follow when revising or amending land use plans and regulations, or when reviewing and approving land use projects within the AIA, to ensure that they will be consistent with this ALUCP. Land use plans and regulations (including zoning, subdivision and building regulations) must include standards for reviewing land use projects for consistency with this ALUCP.

3.8 ALUC REVIEW AFTER ALUCP ADOPTION AND LOCAL AGENCY CONSISTENCY FINDINGS

Exhibit 3C depicts the ALUC review process of land use plans, regulations, and projects after a local agency has implemented this ALUCP. **Sections 3.6.2** through **3.6.8** also apply after local agency implementation of this ALUCP.

ALUC REVIEW AFTER LOCAL AGENCY IMPLEMENTATION

PROJECT SPONSOR

Submits land use plans, regulations and projects to local agency for approval and permitting[1]

LOCAL AGENCY

Submits only land use plans and regulation updates/changes within AIA (not projects) to the ALUC for consistency determination

ALUC

Reviews land use plans and regulation updates/changes and makes consistency determination (with conditions, if required)

IF CONSISTENT

LOCAL AGENCY

Informs project sponsor of determination of consistency and adopts/approves land use plans and regulations (with ALUC conditions, if required)

IF NOT CONSISTENT

LOCAL AGENCY

Informs project sponsor of determination of inconsistency and denies land use plans and regulations. The local agency has three options.

- Local agency amends the plan/regulation and resubmits to ALUC for consistency determination
- OR
- Local agency overrules the ALUC
- OR
- Local agency denies the project

STOP

PROJECT SPONSOR

Proceeds with the implementation of the land use plans and regulations

Note: 1. This includes land use plan amendments proposed by a project sponsor and rezones.
Source/Prepared by: Coffman Associates, Inc.

3.8.1 Review of Land Use Plans and Regulations

Local agencies must submit ALUC applications for consistency determination, per **Section 3.6.1**, for proposed land use plans and regulations. Once a land use plan is found to be consistent with this ALUCP, future land use projects within the plan area must be reviewed for consistency if the plan consisted of only generalized land use designations without project details at the time of original review (e.g., site layout, density/intensity, building heights).

3.8.2 Review of Land Use Projects

After local agency implementation or overrule of this ALUCP, land use projects are required to be submitted to the ALUC, per **Section 3.6.1**, for review only if the land use project:

- Includes a land use plan amendment or rezoning application;
- Has received a determination from the FAA that it will constitute a hazard or obstruction to air navigation; or
- Has characteristics that may result in the creation of a hazard to air navigation, as discussed in **Chapter Four, Section 3.4**.

3.8.3 Voluntary Review of Land Use Projects

After implementation, local agencies may choose to submit land use projects to the ALUC for advisory review, according to **Section 3.6.8.3**. Any ALUC recommendation would be non-binding and would not be subject to any overrule requirements.

3.9 ALUC REVIEW OF PROPOSED AIRPORT PLANS AND PROJECTS

ALUC review of three categories of airport plans is required by state law: (1) airport and heliport master plans, (2) plans for construction of new airports and heliports, and (3) airport expansion plans.

- **Airport Master Plans –** PUC Section 21676(c) mandates that "each public agency owning an airport within the boundaries of an airport land use commission plan shall, prior to modification of its master plan, refer such proposed change to the airport land use commission." The ALUC must then determine if the proposed master plan is consistent with the adopted compatibility plan. This requirement also applies to airport layout plans that would effectively modify any provisions of a previously adopted airport master plan.

- **Construction Plans for a New Airport –** State law also requires that no application for the consideration of plans for a new airport may be submitted to any local, regional, state, or federal agency unless the plans have been (1) approved by the board of supervisors or the city council of the jurisdiction in which the airport is to be located and (2) submitted to and acted upon by the ALUC in the county in which the airport is to be located.

This chapter and the following chapter, which relates to airport expansion plans, are not intended to require that ALUCs review the actual engineering drawings, only the overall layout plan.

- **Airport Expansion Plans –** Section 21664.5 of the *State Aeronautics Act* requires any airport expansion project that entails amendment of the Airport Permit issued by Caltrans to be reviewed by the ALUC for a consistency determination. Airport expansion is defined to include (1) the construction of a new runway, (2) the extension or realignment of an existing runway, (3) the acquisition of runway protection zones or any interest in land for the purpose of the above, and (4) any other expansion of the airport's physical facilities for the purpose of accomplishing (or that is related to the purpose of) the two previous bullet points listed in this chapter.

Under state law (PUC Section 21676[c]), any public agency that owns an airport must refer the proposed action to the ALUC prior to the adoption or modification of the agency's airport master plan. According to the Handbook, "the question to be examined [by airport land use commissions] is whether any components of the airport plan would result in greater noise and safety impacts on surrounding land uses than are assumed in the adopted compatibility plan." Components of the airport plans that merit consideration in the consistency review include the following:

1. Aviation activity forecasts
2. Changes to runway layout
3. Changes to flight tracks resulting from the proposed action
4. Changes to airspace parameters
5. Noise impacts, including whether changes in any of the above items would result in significantly increased noise impacts on surrounding lands
6. Plans for non-aviation development on airport property (such as hotels, office buildings, or industrial buildings), which should be evaluated during the airport master plan process in the same manner as projects proposed elsewhere in the project referral area

The ALUC should update the compatibility plan to account for the new airport plan. When an inconsistency exists between a proposed airport master plan and the compatibility plan, the ALUC has the option to first modify its plan to reflect the assumptions and proposals of the master plan. (Under state law, ALUCs have no jurisdiction over the operation of airports [PUC Section 21674(e)].) If the ALUC determines that the proposed action is inconsistent with the ALUCP, the referring airport sponsor shall be notified. As outlined in PUC Section 21676(c), the airport sponsor may, after a public hearing, propose to overrule the ALUC by a two-thirds vote of its governing body if it makes specific findings that the proposed action is consistent with the purposes of PUC Section 21670.

3.9.1 ALUC Actions on Airport Plans

The ALUC must determine if an airport master plan, airport layout plan, or expansion plan is consistent or inconsistent with this ALUCP. When an inconsistency exists, the ALUC will amend this ALUCP to reflect the assumptions and proposals in the airport plan(s).

3.9.2 Consistency Determination Result

When reviewing airport master plans or expansion plans for existing public-use airports, the ALUC has three action choices:

- Find the airport plan to be consistent with the ALUCP
- Find the airport plan to be inconsistent with the ALUCP
- Modify the ALUCP to reflect the assumptions and proposals in the airport plan (after public hearing with due notice)

Non-aviation uses are determined to be one of the following:

- Consistent – the ALUC does not need to amend this ALUCP
- Conditionally consistent – the airport operator can proceed with the plan or project with conditions, as per the policies and standards of this ALUCP
- Inconsistent – the ALUC must identify the specific conflicts with ALUCP policies and standards

3.10 DEFINITIONS

3.10.1 ***Aeronautics Act*****:** Except as indicated otherwise, the article of the California Public Utilities Code (Sections 21670 et seq.) pertaining to airport land use commissions in the State of California.

3.10.2 **Airport Influence Area (AIA):** The area in which current or future airport-related noise, overflight, safety, and/or airspace protection factors may significantly affect land use compatibility or necessitate restrictions on those uses. For the purposes of this plan, the AIA is the area that establishes the Airport Land Use Commission's jurisdictional authority and boundary. (See Section 1.4.2.)

3.10.3 **Airport Land Use Commission (ALUC):** A commission authorized under the provisions of the California Public Utilities Code (Sections 21670 et seq) and established for the purpose of promoting compatibility between airports and the land uses surrounding them. When capitalized, unless the context clearly indicates otherwise, *Airport Land Use Commission* refers to the ALUC for Shasta County.

3.10.4 **Airport Layout Plan (ALP):** A scaled drawing, prepared in conformance with criteria promulgated by the FAA, that depicts existing and proposed airport facilities, their location(s) on an airport, and pertinent clearance and dimensional information. The airport layout plan may be used as the basis of a compatibility plan adoption or update.

3.10.5 **Airport Master Plan:** A long-range feasibility plan for the development of an airport, including descriptions of the data and analyses on which the plan is based.

3.10.6 **Airspace Protection Area:** The area beneath the *airspace protection surfaces* for the airport. Airspace protection primarily involves limitations on the height of objects on the ground near the airport. Other concerns include activities that can cause electronic or visual impairments to navigation or can attract wildlife.

3.10.7 **Airspace Protection Surfaces:** Imaginary surfaces in the airspace surrounding airports, defined in accordance with criteria set forth in Title 14 Code of Federal Regulations (CFR) Part 77, Subpart C. An object would be an obstruction to air navigation if it is of greater height than any of the imaginary surfaces.

3.10.8 **ALUC:** See **Airport Land Use Commission (ALUC)**.

3.10.9 **Aviation-Related Use:** Any facility or activity directly associated with the air transportation of persons or cargo, or the operation, storage, or maintenance of aircraft at an airport or heliport. These uses specifically include runways, taxiways, and their associated protection areas, as defined in accordance with FAA criteria, together with aircraft parking aprons, hangars, fixed base operator facilities, terminal buildings, and related facilities.

3.10.10 **Avigation Easement:** A type of easement that typically conveys a limited real property right that is granted by a property owner to an airport proprietor and provides for a right-of-way for free and unobstructed passage of aircraft through the airspace over the property at any altitude above a surface specified in the easement (usually set in accordance with 14 CFR Part 77 criteria). An avigation easement typically also allows for the creation of noise, vibrations, fumes, dust, fuel particle emissions, and other effects attendant to normal airport activity and operation of aircraft in flight that may affect the subject real property. Depending on the specific language of the easement document, it may also limit the height of structures, trees, or other objects on the property that would enter the acquired airspace. Avigation easements also typically provide a right-of-entry onto the property, with proper advance notice, for the purpose of removing, marking, or lighting any structure or other object that enters the acquired airspace, and a right to prohibit electrical interference, glare, misleading lights, visual impairments, and other hazards to aircraft flight from being created on the property. As a legal instrument that is officially recorded with the county in which the subject real property is located, an avigation easement provides the current property owner and subsequent property owners with formal notice that the property is located near an airport and may be subject to impacts from airport and aircraft operations.

3.10.11 **California Building Code (CBC):** The CBC governs general building construction standards and contains standards for allowable interior noise levels associated with exterior noise sources (California Building Code, 2016 edition, Part 2, Volume 1, Chapter 12, Section 1207.4). The standards apply to new hotels, motels, dormitories, apartments, and dwellings other than detached single-family residences.

3.10.12 ***California Environmental Quality Act*** **(CEQA):** CEQA is a statute that requires state and local agencies to identify the significant environmental impacts of their actions and avoid or

mitigate those impacts, if feasible (Public Resources Code §2100 et seq.; California Code Regulations, Title 14, §15000 et seq.).

3.10.13 **CNEL:** See **Community Noise Equivalent Level**.

3.10.14 **Code of Federal Regulations (CFR) Part 77:** The part of the Federal Aviation Regulations (Title 14 of the Code of Federal Regulations) that deals with objects affecting navigable airspace in the vicinity of airports. 14 CFR Part 77 establishes standards for identifying obstructions to navigable airspace, sets forth requirements for notice to the FAA of proposed construction or alteration, and provides for aeronautical studies of obstructions to determine their effect on the safe and efficient use of airspace.

3.10.15 **Community Noise Equivalent Level (CNEL):** A 24-hour cumulative noise metric used in the State of California for describing aircraft noise exposure. CNEL represents the average daytime noise level during a 24-hour day, adjusted to an equivalent level to account for the lower tolerance of people to noise during evening and nighttime periods, relative to the daytime period. In computing CNEL, a 4.77-decibel (dB) weight is assigned to sounds during the evening hours (from 7:00 p.m. to 10:00 p.m.) A 10-dB weight is assigned to sounds during the nighttime hours (after 10:00 p.m. and before 7:00 a.m.).

3.10.16 **Decibel (dB):** A unit used to measure the intensity of a sound or the power level of an electrical signal by comparing it with a given level on a logarithmic scale.

3.10.17 **Development Actions:** See the definition of local agency action, regulation, permits, and/or project.

3.10.18 **Division of Aeronautics:** The California Department of Transportation (Caltrans) Division of Aeronautics, or any successor agency that may assume the responsibilities of the Division of Aeronautics.

3.10.19 **Dwelling:** A building, or a portion thereof, that is used or designed and intended to be used for human habitation.

3.10.20 **Easement:** Conveys certain enumerated property rights from the property owner to the holder of the easement. Easements continue in place as the underlying property is bought and sold (they "run with the land"). Moreover, their existence is documented during the title search conducted at the time of a property transfer.

3.10.21 **Existing Land Use:** The actual use of land or the proposed use of the land, evidenced by a vested right to proceed with development or occupancy, as of the effective date of this compatibility plan (provided the new occupancy remains within the same or a reduced level of occupancy as the most recent one). *Vested* means the irrevocable right to complete construction, notwithstanding an intervening change in the law that would otherwise preclude it.

3.10.22 **FAA:** The Federal Aviation Administration.

3.10.23 **General Plan:** For this compatibility plan, this term means any general plan, community plan, specific plan, zoning ordinance, building regulation, land use policy document, or implementing ordinance, or any change thereto, as well as any amendment thereto. (See PUC §21676 and Policy 2.9).

3.10.24 **Habitable Space:** Defined as living, sleeping, eating, and cooking areas within a dwelling unit, as defined in the uniform building code.

3.10.25 **Handbook:** The most recent version of the *California Airport Land Use Planning Handbook,* published by the California Department of Transportation Division of Aeronautics.

3.10.26 **Infill:** Development of vacant land (as defined specifically for this compatibility plan) within established communities or neighborhoods that (1) are already served with streets, water, sewer, and other infrastructure and/or (2) may be comprised of existing land uses that are inconsistent with the compatibility criteria in this compatibility plan.

3.10.27 **Land Use Intensity:** A measure of the concentration of nonresidential development in a given area. Intensity can be expressed as a number of people per acre using a net acreage calculation. (See **Appendix L**, pages L-6 through L-8 for guidance on calculating land use intensity.)

3.10.28 **Land Use Jurisdiction:** Shasta County and the municipalities with land use regulatory jurisdiction within each airport influence area (AIA).

3.10.29 **Land Use Policy Action:** Adoption of any city or county general plan, specific plan, or zoning ordinance (including zoning maps and/or text), or any amendment to a city or county general plan, specific plan, community plan, or zoning ordinance (zoning maps and/or text). A land use policy action also refers to the master plan or amendments to the master plan of any school district, community college district, or special district. (Also see definition of **project**.)

3.10.30 **Local Agency:** A land use jurisdiction, school district, community college district, or other special district that is subject to the provisions of this ALUCP. The ALUC does not have authority over land use actions of federal agencies or Native American tribes.

3.10.31 **Local Agency Actions, Regulations, and Permits:** Any human-caused change to improved or unimproved real property that requires a discretionary permit or approval from any local agency, or that is sponsored and proposed to be built by a local agency, developer, or the real property owner. Actions include, but are not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and/or storage of materials.

3.10.32 **Lot of Record:** A parcel of land platted and recorded as of the effective date of this compatibility plan.

3.10.33 **Lot Coverage:** The ratio between the ground floor area of a building or buildings and the area of the lot or parcel on which the building(s) is/are placed.

3.10.34 **Nonconforming Use:** An existing land use or building that does not comply with this compatibility plan.

3.10.35 **Project:** Any publicly or privately sponsored land use matter that is subject to the provisions of this compatibility plan analysis. For this compatibility plan, this term means any action, regulation, or permit. (See PUC §21676.5.)

3.10.36 **Real Estate Disclosure:** A written statement that notifies the prospective purchaser of real estate, prior to completion of the purchase, of the potential annoyances or inconveniences associated with airport operations. A real estate disclosure is typically provided at the real estate sales or leasing office. Real estate disclosure is required by state law as a condition of the sale of most residential property if the property is located in the vicinity of an airport and is within its AIA. (See Business and Professions Code §11010; Civil Code §§1102.6, 1103.4, 1353.) State law does not require the real estate disclosure to be recorded in the chain of title for the affected property.

3.10.37 **Residential Density:** For airport compatibility purposes, the chief distinguishing feature among residential land uses is the number of dwelling units per acre. To be compatible with airport activities, the number of dwelling units per acre should not exceed the criterion specified for the compatibility zone in which the use would occur.

3.10.38 **Runway Protection Zone:** Trapezoidal-shaped areas located at ground level beyond each end of a runway. Ideally, each runway protection zone should be entirely clear of all objects. The dimensions for the RPZ are taken from the respective airport's airport layout plan or diagram and are based on FAA Advisory Circular 150/5300-13A, *Airport Design*.

3.10.39 **Vested Right:** A right to the proposed use of land, as demonstrated by any of the following:

(a) A vesting tentative map that has been approved, pursuant to California Government Code Section 66498.1, and has not expired

(b) A development agreement that has been executed, pursuant to California Government Code Section 65866, and remains in effect

(c) A valid building permit that has been issued, substantial work that has been performed, and substantial liabilities that have been incurred in good faith reliance on the permit, pursuant to the California Supreme Court decision in *Avco Community Developers, Inc. v. South Coast Regional Com* (1976) 17 Cal.3d 785,791, and its progeny

Chapter Four

COMPATIBILITY POLICIES AND CRITERIA

4.1 AIRPORT COMPATIBILITY ZONES AND CRITERIA

This chapter presents policies and maps relating to the state-mandated airport compatibility factors, as defined in Public Utilities Code (PUC) §21670. The specific airport-related factors discussed below include safety, noise, airspace protection, overflights, and other hazards, such as wildlife attractants and flight interference.

4.2 SAFETY COMPATIBILITY CRITERIA

The overall objective of safety compatibility criteria is to minimize the risks associated with potential aircraft accidents. There are two components to this objective:

- **Safety of Persons on the Ground –** The most fundamental safety compatibility component is to provide for the safety of people and property on the ground in the event of an aircraft accident near an airport.
- **Safety of Aircraft Occupants –** The second safety compatibility component is to enhance the chances of survival of the occupants of an aircraft involved in an accident that occurs beyond the runway environment.

4.2.1 Safety Zones

The 2011 *California Airport Land Use Planning Handbook* (Handbook) provides guidance on the delineation of safety zones and the application of land use policies in those zones. The safety zones are based on the Handbook guidance with adjustments to reflect the specific operating characteristics of the airport (type of aircraft activity, runway length, traffic pattern, etc.). The safety compatibility policy framework is also based on Handbook guidance. The safety compatibility policies of this compatibility plan work in tandem with the airspace protection policies described in Section 4.4. Safety zones were depicted previously on Exhibit 2A.

Based on guidance provided in the Handbook, there are six safety zones:[1]

Zone 1 – Runway Protection Zone (RPZ): Runway protection zones are trapezoidal-shaped areas located at ground level beyond each end of a runway. Ideally, each runway protection zone should be entirely clear of all objects. The dimensions for the RPZ are taken from the respective airport's airport layout plan or diagram and are based on Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5300-13A, *Airport Design*. The accident risk level is considered to be very high within the RPZ, encompassing approximately 20 to 21 percent of the accidents at general aviation airports.

[1] For additional information regarding the safety zones, see Appendix M.

Zone 2 – Inner Approach/Departure Zone (IADZ): This zone encompasses the area that is overflown at low altitudes, typically only 200 to 400 feet above runway elevation. The accident risk level is considered to be high within the IADZ, encompassing approximately 10 percent of general aviation aircraft accidents.

Zone 3 – Inner Turning Zone (ITZ): This zone encompasses locations in which aircraft are typically turning from the base to final approach legs of the standard traffic pattern and are descending from traffic pattern altitude. The ITZ also includes the area in which departing aircraft normally complete the transition from takeoff power and flap settings to climb modes and have begun to turn to their en-route headings. The accident risk level is considered to be moderate to high within the ITZ, encompassing approximately seven percent of general aviation aircraft accidents.

Zone 4 – Outer Approach/Departure Zone (OADZ): The OADZ is situated along the extended runway centerline beyond the IADZ. Approaching aircraft are usually at less than traffic pattern altitude in the OADZ. The accident risk level is considered to be moderate within the OADZ, encompassing approximately five percent of general aviation aircraft accidents.

Zone 5 – Sideline Zone (SZ): The SZ encompasses the close-in area lateral to runways. The primary risk in the SZ is aircraft losing directional control on takeoff. The accident risk level is considered low to moderate within the SZ, encompassing approximately five percent of general aviation aircraft accidents.

Zone 6 – Traffic Pattern Zone (TPZ): The TPZ zone includes the majority of other portions of regular aircraft traffic patterns and pattern entry routes.

Zone 7 – 14 CFR Part 77 Conical Surface: This zone represents the outer Conical Surface for each airport based upon 14 CFR Part 77.

4.2.2 Safety Zone Criteria

The safety zone land use compatibility standards in **Table 4A** restrict the development of land uses that could pose particular hazards to the public or vulnerable populations in case of an aircraft accident. **Table 4A** provides a breakdown of the intensity criteria for the compatibility zones and **Appendix B** provides the methodology for calculating land use intensity.

TABLE 4A | Safety Zone Compatibility Criteria Matrix

Zone 1: Runway Protection	
Dwelling Units (d.u.) per Acre[1]	None
Max. Nonresidential Intensity[2]	None
Required Open Land	All Remaining
Allow	None
Allow With Conditions	None
Not Recommended[3]	All new structures and residential land uses; Parking lots, streets, roads
Other Development Conditions[4]	Not Applicable
Zone 2: Inner Approach/Departure	
Dwelling Units (d.u.) per Acre[1]	1 d.u. per 10 acres
Max. Nonresidential Intensity[2]	40 persons per acre
Required Open Land	30%
Allow	Agriculture; non-group outdoor recreational uses
Allow With Conditions	Residential uses; Warehouses, mini-storage; Industrial uses; vehicle/aircraft repair services; All uses are subject to height limitations for airspace protection
Not Recommended[3]	Major shopping centers, theaters, meeting halls, and other assembly facilities; Children's schools, day-care centers, hospitals, nursing homes; Stadiums, recreation facilities; Hazardous materials
Other Development Conditions[4]	Airspace review in accordance with 14 CFR Part 77.9 (FAA Form 7460)[5]; Dedication of avigation easement[6]; Locate structures maximum distance from extended runway centerline; Minimum NLR of 45 dB residences (including mobile homes) and office buildings[7]

Continues on next page

TABLE 4A | Safety Zone Compatibility Criteria Matrix (continued)

Zone 3: Inner Turning	
Dwelling Units (d.u.) per Acre[1]	1 d.u. per 2 acres
Max. Nonresidential Intensity[2]	70 persons per acre
Required Open Land	20%
Allow	Uses allowed in Zone 2; Greenhouses
Allow With Conditions	Uses allowed with conditions in Zone 2; Office, retail, and other commercial uses
Not Recommended[3]	Major shopping centers, theaters, meeting halls, and other assembly facilities; Children's schools, day-care centers, hospitals, nursing homes; Stadiums, recreation facilities; Hazardous materials
Other Development Conditions[4]	Airspace review in accordance with 14 CFR Part 77.9 (FAA Form 7460)[7]; Dedication of avigation easement[6]; Locate structures maximum distance from extended runway centerline; Minimum NLR of 45 dB residences (including mobile homes) and office buildings[7]
Zone 4: Outer Approach/Departure	
Dwelling Units (d.u.) per Acre[1]	1 d.u. per 2 acres
Max. Nonresidential Intensity[2]	100 persons per acre
Required Open Land	30%
Allow	Uses allowed in Zones 2-3
Allow With Conditions	Uses allowed with conditions in Zones 2-3
Not Recommended[3]	Theaters, meeting halls, and other assembly facilities; Children's schools, day-care centers, hospitals, nursing homes; Stadiums, recreation facilities; Hazardous materials
Other Development Conditions[4]	Airspace review in accordance with 14 CFR Part 77.9 (FAA Form 7460)[5]; Dedication of avigation easement[6]; Minimum NLR of 45 dB in residences (including mobile homes) and office buildings[7]
Zone 5: Sideline	
Dwelling Units (d.u.) per Acre[1]	1 d.u. per acre
Max. Nonresidential Intensity[2]	70 persons per acre
Required Open Land	30%
Allow	Uses allowed in Zones 2-4
Allow With Conditions	Uses allowed with conditions in Zones 2-4; Residential uses
Not Recommended[3]	Stadiums, recreation facilities; Children's schools, day-care centers, hospitals, nursing homes
Other Development Conditions[4]	Airspace review in accordance with 14 CFR Part 77.9 (FAA Form 7460)[5]; Dedication of avigation easement[6]
Zone 6: Traffic Pattern	
Dwelling Units (d.u.) per Acre[1]	No Limit
Max. Nonresidential Intensity[2]	200 persons per acre
Required Open Land	10%
Allow	Uses allowed in Zones 2-5
Allow With Conditions	Uses allowed with conditions in Zones 2-5; Children's schools, day-care centers, hospitals, and nursing homes; Outdoor stadiums and similar uses with high concentrations of people
Not Recommended[3]	None
Other Development Conditions[4]	Airspace review in accordance with 14 CFR Part 77.9 (FAA Form 7460)[5]; Deed notice required for residential uses[6]
Zone 7: Conical Surface	
Dwelling Units (d.u.) per Acre1	No Limit
Max. Nonresidential Intensity2	No Limit
Required Open Land	None
Allow	Uses allowed in Zones 2-6
Allow With Conditions	Any
Not Recommended3	None
Other Development Conditions4	Airspace review in accordance with 14 CFR Part 77.9 (FAA Form 7460)[5]

Notes:

- Residential development that contains more than the indicated number of dwelling units per gross acre (d.u./ac) is not recommended. Clustering of units is encouraged. Gross acreage includes the property at issue plus a share of adjacent roads and any adjacent, permanently dedicated, open lands.
- Usage intensity calculations include the peak number of people per gross acre (e.g., employees, customers/visitors, etc.) who may be on the property at a single point in time (indoors or outside). Gross acreage includes the property at issue plus a share of adjacent roads and any adjacent, permanently dedicated, open lands. See **Appendix B** for more detailed information on calculating usage intensity.
- The uses listed here are not recommended, regardless of whether they meet the intensity criteria, subject to applicable state or federal law. In addition to these uses, other uses that are normally permitted may not be recommended in the respective compatibility zones because they do not meet the usage intensity criteria.
- Additional resources may be found on the Shasta County Planning Division's website: https://www.shastacounty.gov/planning
- Information regarding FAA airspace review filing requirements may be found on the FAA's Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) portal website: https://oeaaa.faa.gov/oeaaa/external/portal.jsp
- As part of certain real estate transactions involving residential property within any compatibility zone (i.e., anywhere within an airport influence area), information regarding airport proximity and the existence of aircraft overflights must be disclosed. This requirement is set by state law.
- NLR = Noise Level Reduction: the outside-to-inside sound level attenuation the structure provides

Legend:

RPZ = Runway Protection Zone
TPZ = Traffic Pattern Zone
ITZ = Inner Turning Zone
IADZ = Inner Approach/Departure Zone
SZ = Sideline Safety Zone
OADZ = Outer Approach/Departure Zone

4.2.3 Infill Development

Where development that already exists is not in conformance with the criteria set forth in this compatibility plan, additional infill development of similar land uses may be allowed to occur, even if such land uses are to be prohibited elsewhere in the zone.

This exception does not apply within Zone 1 (RPZ).

(a) A parcel can be considered for infill development if it meets all the following criteria plus the applicable provisions of either sub-policy (b) or (c) below:

1. The parcel size is no larger than 10.0 acres.
2. At least 65 percent of the site's perimeter is bounded (disregarding roads) by existing uses similar to, or more intensive than those proposed. For projects adjacent to an undeveloped parcel, the closest developed lot may be used.
3. The proposed project would not extend the perimeter of the area defined by the surrounding, already developed, incompatible uses.
4. Further increases in the residential density, nonresidential usage intensity, and/or other incompatible design or usage characteristics (e.g., through use permits, density transfers, addition of second units on the same parcel, height variances, or other strategies) are prohibited.
5. The area to be developed cannot previously have been set aside as open land, in accordance with policies contained in this compatibility plan, unless replacement open land is provided within the same compatibility zone.

(b) For residential development, the average development density (dwelling units per gross acre) of the project site shall not exceed the average density represented by all existing lots that lie fully or partially within a distance of 300 feet from the boundary of the parcel to be divided.

(c) For nonresidential development, the average land use intensity (the number of people per gross acre) of the site's proposed use shall not exceed the lesser of:

1. The average intensity of all existing uses that lie fully or partially within a distance of 300 feet from the boundary of the proposed development; or
2. Double the intensity permitted, in accordance with the criteria for that location (as indicated in the compatibility criteria matrix/**Table 4A**).

(d) Infill development on some parcels should not enable additional parcels to meet the qualifications for infill. The ALUC's intent is that parcels eligible for infill be determined just once; thus, in order for the ALUC to consider proposed development under these infill criteria, the entity with land use authority must first identify the qualifying locations in its general plan or other adopted planning document approved by the ALUC. This action may take place in conjunction with the process of amending a general plan for consistency with the compatibility plan or may be submitted by the local agency for consideration by the ALUC at the time of initial adoption of this compatibility plan. In either case, the burden for demonstrating that a proposed development qualifies as infill rests with the affected land use jurisdiction and/or project proponent.

4.2.4 Hazardous Materials

Facilities with the primary purpose of manufacturing, processing, or storing hazardous materials can pose serious physical and health risks to the public in the case of aircraft accidents. The following flammable, combustible, and/or toxic materials are of particular concern with respect to the safety compatibility criteria provided in **Table 4A**:

(a) Petroleum products that are produced, distributed, dispensed at gas stations, or stored in aboveground tanks with capacities greater than 10,000 gallons[2]

(b) Extremely hazardous substances (EHS), as defined by the Environmental Protection Agency (EPA)[3]

(c) Explosives and fireworks[4]

(d) Infectious agents with Biosafety Levels (BSL) 2, 3, or 4[5]

4.2.5 Expansion or Reconstruction of Existing Building

An existing safety-incompatible land use either exceeds the residential density and/or nonresidential intensity levels or is designated as an incompatible use in **Table 4A**. If it exceeds either limit, enlargement and reconstruction are subject to consistency review and the following requirements:

- **Residential Uses Only:** An existing residential building may be expanded (in building area) or reconstructed if there is no increase in density. An accessory dwelling unit, as defined by state law,[6] is not counted toward this limitation.
- **Nonresidential Uses Only:** An existing nonresidential building may be expanded (in building area) or reconstructed if there is no increase in the intensity of the use. Any additional space must not be occupied, such as storage or mechanical equipment.
- **Additional Limitations for Safety Zone 1:** Reconstruction of an existing building is allowed only if the building is destroyed by calamity (e.g., fire, earthquake, etc.).

4.2.6 Mixed-Use Projects

For a proposed project with a mix of residential and nonresidential uses, residential density is converted to intensity and the total number of residential occupants is limited to half the maximum nonresidential intensity specified in **Table 4A**. For live/work projects, each dwelling unit is to be counted toward density and only the square footage devoted to nonresidential use is to be used in the calculation of nonresidential intensity. When converting residential density to intensity, the number of people per household for the jurisdiction, as available from the U.S. Census Bureau, should be used.

[2] State of California Health and Safety Code, Section 25270
[3] Title 40 Code of Federal Regulations Part 355
[4] California Code of Regulations, Title 8, § 5252
[5] Centers for Disease Control and Prevention, National Institute of Health. *Biosafety in Microbiological and Biomedical Laboratories, 6th Edition, 2020*
[6] California Government Code §§65852.150, 65852.

4.2.7 Change of Use in Existing Buildings

Consistency review is required when a new use is proposed within an existing building. A change of use is defined as a change in density for residential land uses or a change in intensity for nonresidential land uses.

- **Nonresidential Projects:** The maximum intensity of a proposed nonresidential project must not exceed the maximum allowable intensity, as shown in **Table 4A**.
- **Residential Projects:** The total density of a conditionally compatible residential project must not exceed the maximum allowable density, as shown in **Table 4A**. Construction of a single-family residence, including an accessory dwelling unit, is allowed on a legal lot of record if permitted by the local agency, as described in Section 3.4.4 in Chapter Three.
- **Mixed-Use Projects:** The maximum density and intensity for conditionally compatible projects are limited, as described in **Policy 4.2.6**.

4.3 NOISE COMPATIBILITY CRITERIA

The objective of noise compatibility criteria is to minimize the number of people exposed to frequent and/or high levels of airport noise capable of disrupting noise-sensitive activities.

4.3.1 Noise Compatibility Criteria

The basic strategy for achieving noise compatibility in an airport vicinity is to limit the development of land uses that are particularly sensitive to noise. The compatibility of proposed land uses located in the airport noise compatibility contours shall be determined according to the noise/land use compatibility criteria shown in **Table 4B**. The criteria indicate the maximum acceptable airport noise levels, described in terms of Community Noise Equivalent Level (CNEL), for the indicated land uses. The compatibility criteria indicate whether a proposed land use is *compatible*, *conditionally compatible*, or *not compatible* within each contour zone, designated by the identified CNEL ranges.

- *Compatible* means the proposed land use is compatible with the CNEL level indicated in the table and may be permitted without any special requirements related to the attenuation of aircraft noise.
- *Conditionally compatible* means the proposed land use is compatible if the conditions described in **Table 4B** are met.
- *Not compatible* means the proposed land use is incompatible with aircraft noise at the indicated CNEL level.

TABLE 4B | Noise Compatibility Criteria Matrix – Redding Regional Airport Land Use Compatibility Plan

	CNEL			
	60-64	65-69	70-74	75+
RESIDENTIAL				
Single units – detached	C[1]	N	N	N
Singe units – semi-detached	C[1]	N	N	N
Single units – attached row	C[1]	N	N	N
Two units	C[1]	N	N	N
Multi-family, three or more units (rental and ownership)	C[1]	N	N	N
Group quarters (including retirement homes, assisted living, nursing homes, college dormitories, military barracks, correctional residential facilities, extended-stay hotels*)	C[1]	N	N	N
Mobile home parks or courts	C[1]	N	N	N
PUBLIC/INSTITUTIONAL FACILITIES				
Education facilities (including daycare centers [> 14 children], schools for children [grades K-12], adult schools, colleges, universities)	C[1]	N	N	N
Religious facilities, libraries, museums, galleries, clubs, lodges	C[1]	N	N	N
Hospitals, nursing homes, and other health care services	Y	N	N	N
Governmental services (administrative, police, fire stations**)	Y	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N
Cemeteries, cemetery chapels, mortuaries	Y	Y	Y	N
RECREATIONAL				
Outdoor sport events, stadiums, playgrounds, campgrounds, and recreational vehicle parks	Y	N	N	N
Nature exhibits, wildlife reserves, zoos	Y	N	N	N
Indoor recreation, amusements, athletic clubs, gyms and spectator events, movie theaters, parks, outdoor recreation (tennis courts, golf courses, riding trails, etc.)	Y	Y	N	N
COMMERCIAL				
Wholesale trade	Y	Y	Y	N
Retail trade (eating and drinking establishments, personal services, dance studios)	Y	Y	Y	N
Finance, insurance, real estate services	Y	Y	Y	N
Business services	Y	Y	Y	N
Repair services	Y	Y	Y	N
Professional services	Y	Y	Y	N
Hotels, motels, transient lodgings, bed and breakfasts	Y	Y	N	N
INDUSTRIAL				
Manufacturing	Y	Y	Y	Y
Printing, publishing, allied industries	Y	Y	Y	Y
Chemicals, allied products manufacturing	Y	Y	Y	Y
Miscellaneous manufacturing	Y	Y	Y	Y
Highway and street right-of-way and other transportation, communication, utilities	Y	Y	Y	Y
Automobile parking car dealerships, car washes, indoor/outdoor storage facilities, gas stations, truck stops, transportation terminals	Y	Y	Y	Y
Processing of food, wood, and paper products; printing and publishing; warehouses, wholesale and storage activities	Y	Y	Y	Y
Refining, manufacturing, and storage of chemicals, petroleum, and related products; manufacturing and assembly of electronic components, etc.	Y	Y	Y	Y
Salvage yards, solid waste facilities, natural resource extraction and processing, agricultural, mills and gins	Y	Y	Y	Y
AGRICULTURE				
Agriculture (except livestock)	C[1]	C[1]	C[2]	N
Livestock farming and animal breeding, animal shelters, and kennels	C[1]	C[1]	C[2]	N
Agricultural-related activities	Y	C[1]	C[2]	N
Forestry activities and related services	Y	C[1]	C[2]	N
Fishing activities and related services	Y	C[1]	C[2]	N

Table Notes:

- CNEL = Community Noise Equivalent Level, in A-weighted decibels.
- Y = yes: land use and related structures are compatible without restrictions.
- C = conditionally compatible: land use and related structures are permitted, provided that sound insulation is provided to reduce interior noise levels from exterior sources to CNEL 45 dB or lower.
- N = no: land use and related structures are not compatible.

[1] Residential buildings must be sound-insulated to achieve an indoor noise level of CNEL 45 dB or lower from exterior sources. (See Policy 3.2.5.)
[2] Accessory dwelling units are not compatible.

Note:
Land uses not specifically listed shall be evaluated, as determined by the ALUC, using the criteria for similar uses.
*Lodging intended for stays by an individual person of no more than 25 consecutive days and no more than 90 total days per year; facilities for longer stays are included in the extended-stay hotel category.
**Airport rescue and firefighting (ARFF) facilities are exempt from this requirement, per FAA regulations.

4.3.2 Residential Uses

Residential uses are not considered compatible above 65 CNEL. This is consistent with the Handbook and the California Code of Regulations.

4.3.3 Noise Exposure for Other Land Uses

Noise level compatibility standards for other types of land uses shall be applied in the same manner as the above residential noise level criteria. The extent of outdoor activity associated with a particular land use is an important factor to be considered in evaluating its compatibility with airport noise. Examples of acceptable noise levels for other land uses in an airport's vicinity are presented in **Table 4B**.

4.3.4 Mixed-Use Projects

When a land use project involves a combination of different land uses (listed in **Table 4B**), each component use must comply with the applicable noise standards.

4.3.5 Interior Noise Levels

Land uses within 60 CNEL noise exposure contours for which interior activities may be easily disrupted by noise, as provided below, shall be required to comply with the following interior noise level criteria:

(a) The maximum aircraft-related interior noise level that shall be considered acceptable for land uses near airports is 45 CNEL in:

- Any habitable rooms of single- or multi-family residences;
- Hotels and motels;
- Hospitals and nursing homes;
- Places of worship, meeting halls, theaters, and mortuaries;
- Office buildings; and
- Schools, libraries, and museums.

(b) The noise contours identified in Section 4.2.1 depict this compatibility plan to be used in determining compliance with these criteria. The calculations should assume that windows are closed.

4.3.6 Expansion, Reconstruction, or Change of Use in an Existing Building

When a project involves expansion, reconstruction, or change of use in an existing building, sound attenuation (outlined in **Table 4B**) must be achieved for land uses that are classified as *conditionally compatible*. Regarding noise, reconstruction of an incompatible land use may occur if the building was destroyed by a calamity and the reconstructed building meets the 45-dB CNEL sound performance level. An avigation easement is also required, consistent with **Table 4B**.

4.3.7 Construction of New or Expanded Airports or Heliports

Any proposed construction of a new airport or heliport, or expansion of facilities at the airport discussed in this plan, that would result in a significant increase in cumulative noise exposure (measured in terms of CNEL) shall include measures to reduce the exposure to a less-than-significant level, consistent with FAA regulations and federal aviation laws. For the purposes of this plan, a noise increase shall be considered significant if:

(a) In a location with an existing ambient noise level of less than 60 CNEL, the project would increase the noise level by 5.0 CNEL or more.

(b) In a location with an existing ambient noise level of between 60 and 65 CNEL, the project would increase the noise level by 3.0 CNEL or more.

(c) In a location with an existing ambient noise level of more than 65 CNEL, the project would increase the noise level by 1.5 CNEL or more.

4.4 AIRSPACE PROTECTION

The objective of airspace protection is to avoid the development of land use conditions that can increase the risk of accidents occurring by posing hazards to flight. The particular hazards of concern are (1) airspace obstructions, (2) wildlife hazards (particularly bird strikes), and (3) land use characteristics that pose other potential hazards to flight by creating visual or electronic interference with air navigation.
Tall structures, trees, and other objects, particularly when located near airports or on high terrain, may constitute hazards to aircraft in flight. Federal regulations establish the criteria for evaluating potential obstructions. These regulations also require that the FAA be notified of proposals for the creation of certain objects. The FAA conducts aeronautical studies of these objects and determines whether they would be hazards, but it does not have the authority to prevent their creation. During this process, the FAA may issue a Determination of No Hazard to Air Navigation, which addresses only airport operations and does not apply to land use decisions. The purpose of compatibility plan airspace protection policies, together with regulations established by local land use jurisdictions and the state government, is to ensure that hazardous obstructions to the navigable airspace do not occur.

4.4.1 Basis for Height Limits

The criteria for limiting the height of structures, trees, and other objects in the vicinity of an airport shall be based on 14 CFR Part 77, Subpart C, and applicable airport design standards published by the FAA.

4.4.2 ALUC Review of Height of Proposed Objects

All proposed objects must comply with the height limitations set forth by the FAA criteria, including 14 CFR Part 77. Proponents of development projects within the airport influence area (AIA) must notify the FAA, as required by 14 CFR Part 77, Subpart B, which states that a Form 7460-1, *Notice of Proposed Construction or Alteration*, must be filed at least 45 days prior to construction if:

- The structure will exceed 200 feet above ground level;
- The structure will be in proximity to an airport and will exceed the slope ratio;

- The structure involves construction of a traverseway (i.e. highway, railroad, waterway, etc.) and would exceed a standard of 14 CFR Part 77, Section 9(a) or Section 9(b) once adjusted upward with the appropriate vertical distance;
- The structure will emit frequencies and does not meet the conditions of the FAA's co-location policy;
- The structure will be in an instrument approach area and might exceed Part 77, Subpart C;
- The proposed structure will be in proximity to a navigation facility and may impact navigation signal reception;
- The structure will be on an airport or heliport; or
- The filing has been requested by the FAA.

The FAA's Notice Criteria Tool assists in applying Part 77 notice criteria: https://oeaaa.faa.gov/oeaaa/external/ gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm

Under this policy:

(a) Local jurisdictions shall inform project proponents of the requirements for notification to the FAA.

(b) The requirement for notification to the FAA shall not necessarily trigger an airport compatibility review of an individual project by the ALUC if the project is otherwise in conformance with the compatibility criteria established herein.

(c) FAA review is required for any proposed structure more than 200 feet above the surface level of its site. All such proposals shall also be submitted to the ALUC for review, regardless of where in the county they would be located.

(d) Any project submitted for airport land use compatibility review shall include a copy of the results of the FAA's Notice Criteria Tool.

(e) If required based on the results of the FAA's Notice Criteria Tool, any project submitted for airport land use compatibility review for which FAA notification is required shall include a copy of the CFR Part 77 notification to the FAA and the FAA findings.

In addition, FAA notification is required for owners or operators proposing to site new or expand existing municipal solid waste landfills (MSWLFs) within a five-mile radius of any airport runway (CFR 40, Subchapter 1, Part 258, Subpart B, Section 258.10). FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, or another suitable document similar to FAA Form 7460-1 may be used to notify the appropriate FAA Regional Airports Division Office of a planned siting or expansion of a MSWLF, as well as other potential wildlife attractants.

4.4.3 Avigation Easement Dedication

As a condition for development approval, the owner of any property proposed for development within Safety Zones 1 (RPZ), 2 (IADZ), 3 (ITZ), 4 (OADZ), or 5 (SZ) *s*hall be required to dedicate an avigation easement to the entity that owns the affected airport. The avigation easement shall:

(a) Provide the right of flight in the airspace above the property;

(b) Allow the generation of noise and other impacts associated with aircraft overflight;

(c) Restrict the height of structures, trees, and other objects;

(d) Permit access to the property for the removal or aeronautical marking of objects that exceed the established height limit; and

(e) Prohibit electrical interference, glare, and other potential hazards to flight from being created on the property.

An example of an avigation easement is provided in **Appendix C**.

4.4.4 Other Flight Hazards

New land uses that may cause visual, electronic, or increased bird strike hazards to aircraft in flight shall not be permitted within any airport's influence area. Specific characteristics of land use proposals to be evaluated include:

(a) Glare or distracting lights that could be mistaken for airport lights;

(b) Sources of dust, steam, or smoke that may impair pilot visibility;

(c) Sources of electrical interference with aircraft communications or navigation; and

(d) Any proposed uses, especially landfills and certain agricultural uses, that create increased attraction for large flocks of birds. (Refer to FAA AC 150/5200-33B, *Hazardous Wildlife Attractants On or Near Airports*, and AC 150/5200-34A, *Construction or Establishment of Landfills Near Public Airports*, or the latest versions of these advisory circulars.)

4.4.5 FAA Notification

Proponents of a project that involves objects that may exceed a 14 CFR Part 77 surface must notify the FAA, as required by 14 CFR Part 77, Subpart B, and by the PUC, Sections 21658 and 21659. (Notification to the FAA under 14 CFR Part 77, Subpart B, is required, even for certain proposed construction that does not exceed the height limits allowed by Subpart C of the regulations. Refer to Appendix M for the specific FAA notification requirements.)

(a) Local jurisdictions shall inform project proponents of the requirements for notification to the FAA.

(b) The requirement for notification to the FAA shall not necessarily trigger an airport compatibility review of an individual project by the ALUC if the project is otherwise in conformance with the compatibility criteria established herein.

(c) FAA review is required for any proposed structure more than 200 feet above the surface level of its site. All such proposals shall also be submitted to the ALUC for review, regardless of where in the county they would be located.

(d) Any project submitted to the ALUC for airport land use compatibility review for which FAA notification is required shall include a copy of the CFR Part 77 notification to the FAA and the FAA findings, if available.

In addition, FAA notification is required for owners or operators proposing to site new or expand existing MSWLFs within a five-mile radius of any airport runway (CFR 40, Subchapter 1, Part 258, Subpart B, Section 258.10). FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, or another suitable document similar to FAA Form 7460-1 may be used to notify the appropriate FAA Regional Airports Division Office of a planned siting or expansion of a MSWLF, as well as other potential wildlife attractants.

4.5 OVERFLIGHT

Noise from individual operations, especially by comparatively loud aircraft, can be intrusive and annoying in locations beyond the limits of the mapped noise contours. Sensitivity to aircraft overflights varies from one person to another. The purpose of overflight compatibility policies is to help notify people about the presence of overflights near airports so they can make more informed decisions regarding acquisition or lease of property in the affected areas. Overflight compatibility is particularly important with regard to residential land uses.

As part of residential real estate transactions, California state statutes (Business and Professions Code, Section 11010, and Civil Code, Sections 1102.6, 1103.4, and 1353) require that information be disclosed regarding whether the property is situated within an AIA.

(a) With certain exceptions, these state requirements apply to the sale or lease of newly subdivided lands and to the sale of existing residential property.

(b) The statutes define *airport influence area (AIA)* as "the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses as determined by an airport land use commission." The AIA for Redding Regional Airport is depicted on **Exhibit 1B**.

(c) Where disclosure is required, the following statement shall be provided:

NOTICE OF AIRPORT IN VICINITY: This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase to determine whether they are acceptable to you.

(d) For the purposes of this compatibility plan, the above real estate disclosure provisions of state law shall continue in effect as ALUC policy with respect to new development, even if the law is rescinded. Furthermore, each land use jurisdiction affected by this compatibility plan should adopt a policy designating the AIA as the area wherein disclosure of airport influences is required in conjunction with the transfer of residential real estate. Such a policy should require that signs providing the above notice be prominently posted in the real estate sales office(s) and/or other key locations at any new project within the AIA. Such local jurisdiction policies should also be applied to lease or rental agreements for existing residential property.

Appendix A
NOISE ANALYSIS AND METHODOLOGY

NOISE AND NOISE-COMPATIBLE LAND USE

Noise is unwanted sound that can disrupt activities – for example, sleeping and student learning – in addition to causing annoyance. Certain uses have special noise sensitivities, such as national parks and significant historic or cultural resources. Aviation noise is primarily caused by aircraft operations, including departures, arrivals, overflights, taxiing, and engine run-ups.

Federal land use compatibility guidelines are established under Title 14 Code of Federal Regulations (14 CFR) Part 150, *Airport Noise Compatibility Planning* (Part 150). According to Part 150, residential land use and schools are not considered compatible with a 65-decibel (dB) or higher community noise equivalent level (CNEL) noise exposure contour.[1] Religious facilities, hospitals, and nursing homes within a 65-dB CNEL contour are generally compatible if an interior noise level reduction of 25 dB is incorporated into the design and construction of the structures.

ANALYSIS METHODOLOGY AND RESULTS

The standard methodology for analyzing noise conditions at airports involves the use of a computer simulation model. The Federal Aviation Administration (FAA) has approved the Aviation Environmental Design Tool (AEDT) for aircraft noise environmental documentation. A variety of user-supplied input data are required to use the AEDT, including the airport elevation; a geographic definition of the airport runways; a geographic description of ground tracks above which aircraft fly; and the assignment of specific aircraft activity to individual flight tracks.

Based on user- and AEDT-provided inputs, the model calculates 24-hour aircraft sound exposure values within a grid covering the airport and surrounding areas. Each grid value – represented with the CNEL metric at an intersection point on the grid – represents a noise level for that geographic location. To create the noise contours, a line linking equal values, similar to those on a topographic map, is drawn to connect points of the same CNEL noise value. The noise contour identifies equal noise exposure in the same way a topographic contour represents equal elevation.

The most recent version of the AEDT model, Version 3f, was used to develop the existing and future noise exposure contours for Redding Regional Airport (shown on **Exhibits 2B** and **2C**).

[1] Noise-sensitive receptors are generally residences, churches/places of worship, hospitals/healthcare facilities, and educational facilities. Churches/places of worship are defined as permanently established facilities intended solely for use as places of worship and not meant to be converted to other potential uses. For a hospital/healthcare facility to be considered a noise-sensitive medical facility, it must provide for overnight stays or longer recovery periods for which rest and relaxation are key considerations for use of the facility. Schools are facilities that provide full-time use for instruction and training of students.

AIRCRAFT OPERATIONS AND FLEET MIX

The noise contours reflect anticipated use of the airport, based on operations discussed in the Redding Regional Airport Master Plan, Chapter Two – Forecasts. To accurately represent the noise conditions at the airport, the AEDT provides aircraft noise data for many of the aircraft operating in the national fleet. **Table C1** summarizes the operations and aircraft types used to model noise at Redding Regional Airport. The selection of individual aircraft types is important to the modeling process because different aircraft types generate different noise levels.

TABLE C1 | Redding Regional Airport Fleet Mix and Operations

Aircraft Type	AEDT Designator[1]	Existing (2022)[2]	Ultimate (2042)[2]
ITINERANT OPERATIONS			
Single-Engine Piston			
Single-Engine Fixed-Pitch Propeller	GASEPF	9,546	13,086
Single-Engine Variable-Pitch Propeller	GASEPV	9,545	13,086
Subtotal:	–	**19,091**	**26,172**
Multi-Engine Piston			
Beech Baron	BEC58P	2,600	1,950
Subtotal:	–	**2,600**	**1,950**
Turboprop			
Cessna 208 Caravan	CNA208	2,518	3,718
Beech King Air 90	1900D	2,996	4,424
Bombardier Q-400	DHC830	734	1,084
Pilatus PC-12	Pilatus PC-12	482	712
Short 330	SD330	50	74
C-130 Hercules (Military)	C130E	94	138
Subtotal	–	**6,874**	**10,150**
Turbojet			
Cirrus Vision SF50	CNA510	112	284
Cessna Citation CJ3	CNA525C	96	244
Bae 146-200	CNA55B	8	20
Beechjet 400-T-1 (Military)	CNA680	26	67
Challenger 300/Bombardier CRJ-200	CNA560XL	2,968	7,531
Cessna 500/Citation I/Cessna Citation V/Ultra/Encore	CL600	750	1,903
Bombardier CRJ-700/Citation Sovereign/Citation X	LEAR35	308	782
Bombardier Learjet 35/36-45-55	BD-700-1A10	150	381
F-18 Hornet (Military)	GIV	28	71
Gulfstream IV & V	GV	82	208
Boeing 737-300, 400, 700 & 800	G650ER	398	1,010
Subtotal:	–	**4,926**	**12,501**
Helicopter			
Bell UH-1H Super Huey (CalFire)	R44	1,650	2,350
Sikorsky S70i (CalFire)	B407	1,650	2,350
Robinson R22, R44 & R66	SA355F	2,650	4,150
Eurocopter EC130 (Medivac)	H500D	1,650	2,350
Subtotal:	–	**6,600**	**9,400**
TOTAL ITINERANT:	–	**40,091**	**60,173**

Continues on next page

TABLE C1 | Redding Regional Airport Fleet Mix and Operations (continued)

Aircraft Type	AEDT Designator[1]	Existing (2022)[2]	Ultimate (2042)[2]
LOCAL OPERATIONS			
Single-Engine Piston			
Single-Engine Fixed-Pitch Propeller	GASEPF	10,448	15,824
Single-Engine Variable-Pitch Propeller	GASEPV	10,448	15,824
Subtotal:	**–**	**20,896**	**31,648**
Multi-Engine Piston			
Beech Baron	BEC58P	400	250
Subtotal:	**–**	**400**	**250**
Helicopter			
Robinson R44	R44	1,000	1,800
Subtotal:	**–**	**1,000**	**1,800**
TOTAL LOCAL:	**–**	**22,296**	**33,698**
TOTAL OPERATIONS:	**–**	**62,387**	**93,871**

Sources: [1]Coffman Associates analysis; [2]Redding Regional Airport Master Plan, Chapter Two – Forecasts, approved by the FAA on August 30, 2023

A variety of general aviation single-engine fixed-propeller aircraft were modeled with the GASEPV and GASEPF aircraft in the AEDT. The GASEPV represents many single-engine general aviation aircraft, including the Mooney M-20, Cessna 172 and 180, and Piper Cherokee Arrow. The general aviation single-engine fixed-pitch propeller model, the GASEPF, also represents several single-engine general aviation aircraft. These include the Cessna 150, Piper Archer, and Piper Tomahawk. The GASEPV and GASEPF designators were used to model itinerant and local single-engine piston aircraft operations.

The AEDT fleet database identifies the BEC58P (Beech Baron light twin-engine aircraft) as a comparable aircraft to the Beech 55 Baron, Beech 58 Baron, Beech 60 Duke, Piper PA-34 Seneca, Cessna 310, Cessna 340, and Cessna 402, among others. The BEC58P designator was used to model itinerant and local multi-engine piston aircraft operations.

Turboprop, jet and helicopter AEDT designators were selected based on information contained in Chapter Two – Forecasts of the ongoing Redding Regional Airport Master Plan. The forecasts used to generate the noise fleet mix were approved by the FAA on August 30, 2023 (see Master Plan Appendix B – Forecast Approval).

TIME OF DAY

The time of day at which aircraft operations occur is important as input to the AEDT due to the 10-dB nighttime (10:00 p.m. to 7:00 a.m.) and 4.77-dB evening (7:00 p.m. to 10:00 p.m.) weighting of flights.

At Redding Regional Airport, most civilian itinerant operations and local operations (90 percent) occur during daytime hours (7:00 a.m. to 7:00 p.m.), with an estimated 7 percent occurring during evening hours (7:00 p.m. to 10:00 p.m.), and 3 percent occur during nighttime hours (10:00 p.m. to 7:00 a.m.).

RUNWAY USE

Runway usage data are also an essential component for developing noise exposure contours. Runway use input data for fixed-wing operations are presented in **Table C2**. Four helipad locations (HP1, HP2, HP3, and HP4) were used to model helicopter operations, with CalFire operations modeled on HP1, medivac operations distributed equally between HP2 and HP3, and all other helicopter operations modeled on HP4 located on the main apron.

TABLE C2 | Redding Regional Airport Runway Use Distribution by Aircraft Type – Fixed-Wing

Runway	Turbojet	Turboprop	Piston Itinerant	Piston Local
16	40%	40%	38.5%	38.5%
34	60%	60%	58.5%	58.5%
12	0%	0%	1.5%	1.5%
30	0%	0%	1.5%	1.5%

Sources: FAA ATCT observation; Coffman Associates analysis

FLIGHT TRACKS

Flight patterns can be categorized into the following types: arrivals, departures, and local (or touch-and-go). Arrivals and departures correspond to itinerant traffic traveling to or from the airport, while local operations represent those conducted within the local traffic pattern. The touch-and-go nomenclature refers to aircraft landing briefly on the runway and then resuming flight; pilots use this technique to practice landings or other procedures. These paths are included in the model to indicate where each aircraft type operates.

Arrival, departure, and local flight tracks for this airport were modeled based on existing traffic patterns for Runways 16-34 and 12-30. Modeled flight tracks were based on a standard left-hand traffic pattern published for all runways, which is consistent with the existing traffic pattern at the airport. Additionally,

FLIGHT PROFILES

The standard arrival profile used in the AEDT program is a three-degree approach. No indication was given by airport staff that there is any variation on this standard procedure for civilian aircraft; therefore, the standard approach was included in the model as representative of local operating conditions.

Appendix B
IMPLEMENTATION TOOLS AND DOCUMENTS

This appendix provides information helpful to the implementation of the Airport Land Use Compatibility Plan (ALUCP). This information is current as of the publication date of the ALUCP. Users are advised to check for updated documentation for these tools.

- Local Agency ALUCP Implementation Guide
- Review Procedures
- FAA Form 7460-1 Guide
- Guidance for Calculating Land Use Intensity
- General Plan Consistency Checklist
- Sample Avigation Easement
- Sample Deed Notice

Additional information regarding this topic can be found on the Caltrans Division of Aeronautics Website: http://www.dot.ca.gov/aeronaut/index.html

LOCAL AGENCY ALUCP IMPLEMENTATION GUIDE

This guide is provided to help affected local agencies when modifying their general plans and other local regulations to be consistent with the ALUCPs and to facilitate Airport Land Use Commission (ALUC) review of those local agency plans and regulations.

General Plan — A general plan, and any specific, community, or other land use plan may be more restrictive than the ALUCPs. However, these plans may not be more permissive than the ALUCPs. General plan amendments will be required if there are any conflicts with the ALUCPs (unless those conflicts represent existing conditions).

Land Use Element — General plan land use designations may not exceed ALUCP safety compatibility standards or allow land uses which are incompatible to be located within safety zones. Designations reflecting existing conditions already in excess of ALUCP safety standards do not render a general plan inconsistent with the ALUCPs. However, new development of vacant property, redevelopment, or a change of use within an existing structure must comply with ALUCP safety standards.

Noise Element — Maximum noise exposure limits for planned/proposed land uses established in a general plan may not be more permissive than the limits established by the ALUCPs. However, a general plan may establish more restrictive limits with respect to aviation-related noise than for noise from other sources, in consideration that aviation-related noise is often judged to be more objectionable than other types of noise.

Zoning Ordinance — If a local agency chooses to implement the ALUCPs through its zoning ordinance, modification of a general plan to achieve consistency with the ALUCPs is typically not necessary. Modifications should eliminate any language conflicting with the ALUCPs and make reference to the zoning ordinance.

Intensity Limitations on Nonresidential Uses — While zoning ordinances are typically not based on people per acre intensities for nonresidential land uses, such policies can be established by other performance-oriented criteria that correspond to the ALUCPs. These include limits on building area, floor area ratios, parking spaces, or other design parameters equivalent to the usage intensity criteria.

Prevention of Incompatible Uses — Provision must be made to prohibit land uses that are not consistent within the safety zones or noise contours and are not existing at the time of ALUCP adoption.

Height Limitations and Other Hazards to Flight — To protect airspace, limitations must be set on the height of new structures and other objects equivalent to the maximum heights established by 14 CFR Part 77 and codified by the ALUCPs. Restrictions must also be established on other land use characteristics that can cause hazards to flight, such as visual or electronic interference with navigation and uses that attract wildlife.

Sound Performance Requirements — The ALUCPs requires reduced sound performance levels of structures for certain noise-sensitive uses within high noise-impact areas in order to reduce aircraft-related noise to an acceptable level. Local regulations must include equivalent criteria.

Avigation Easements — As a condition of approval for new development within certain noise contours or involving airspace penetrations, the ALUCPs require dedication of an avigation easement to the airport operator. Local regulations must address these requirements for new development.

Expansion and Reconstruction — Local agency regulations regarding the expansion and reconstruction of uses must be equivalent to or more restrictive than those in the ALUCPs. Local agency regulations must ensure that existing uses which are incompatible with noise or safety policies of the ALUCPs are subject to the limitations imposed by the ALUCPs.

REVIEW PROCEDURES

In addition to incorporation of ALUC compatibility criteria, local agency implementing documents must specify the manner in which land use plans, regulations, and projects will be reviewed for consistency with the compatibility standards.

Actions Always Requiring ALUC Review — All local agency legislative actions require ALUC review regardless of whether or not the agency has an ALUCP implementation plan that has been approved by the ALUC and adopted by the local agency's governing body, or if the local agency has overruled the ALUCPs. These legislative actions include the adoption of or amendments to a general plan or any specific, community, or other land use plans. Also included are amendments to a zoning ordinance (such as rezones) or building code which would impact matters regulated by the ALUCPs.

Process for Compatibility Reviews by Local Agencies — Local agencies must establish project processing procedures that will be used to ensure that ALUCP compatibility policies and standards are addressed during project reviews, whether discretionary or ministerial. This can be accomplished by a standard review procedure checklist that includes reference to ALUCP compatibility standards and use of a GIS-based program to identify all parcels within the airport influence area.

Variances and Deviations — Local agency procedures for granting variances and deviations to a zoning ordinance must include provisions to ensure that they do not result in a conflict with ALUCP compatibility standards. Any variance or deviation that involves issues of noise, safety, or airspace protection compatibility, as addressed in the ALUCPs, should be referred to the ALUC for review.

Condition Satisfaction and Enforcement — Policies must be established to ensure compliance with ALUCP compatibility standards during both the permitting process and the lifetime of the development. Enforcement procedures are especially necessary with regard to adhering to limitations on safety zone densities and intensities.

PROJECT FAA FORM 7460-1 GUIDE

The FAA Form 7460-1 may be filed electronically at: https://oeaaa.faa.gov/oeaaa/external/portal.jsp. When FAA review is required, a copy of the FAA notice of determination letter must be included with any ALUC application for determination of consistency.

GUIDANCE FOR CALCULATING LAND USE INTENSITY

The following contains guidance on how to calculate the intensity of land uses (the number of people per acre) based on Methods for Determining Concentrations of People, Appendix G of the California Airport Land Use Planning Handbook from 2011 (hereafter referred to as Handbook).[1]

As stated on page G-1 in Appendix G of the Handbook, "the most difficult part about making a people-per-acre determination is estimating the number of people likely to use a particular facility. There are several methods which can be utilized, depending upon the nature of the proposed use:

- **Parking Ordinance:** The number of people present in a given area can be calculated based upon the number of parking spaces provided. Traffic studies can be used to develop an assumption regarding the number of people per vehicle. The number of people per acre can then be calculated by dividing the number of people on-site by the size of the parcel in acres. This approach is appropriate where the use is expected to be dependent upon access by vehicles. Depending upon the specific assumptions utilized, this methodology typically results in a number in the low end of the likely intensity for a given land use.

[1] https://dot.ca.gov/-/media/dot-media/programs/aeronautics/documents/californiaairportlanduseplanninghandbook-a11y.pdf

- **Maximum Occupancy:** The International Building Code (IBC) can be used as a standard for determining the maximum occupancy of certain uses. The chart provided as **Table H1** indicates the required number of square feet per occupant. The number of people on the site can be calculated by dividing the total floor area of a proposed use by the minimum square feet per occupant requirement listed in the table. The maximum occupancy can then be divided by the size of the parcel in acres to determine the number of people-per-acre. Surveys of actual occupancy levels conducted by various agencies have indicated that many retail and office uses are generally occupied at no more than 50 percent of their maximum occupancy levels, even at the busiest times of day. Therefore, the number of people calculated for office and retail uses should usually be adjusted (50%) to reflect the actual occupancy levels before making the final people-per-acre determination. Even with this adjustment, the IBC-based methodology typically produces intensities at the high end of the likely range."[2]

- **Survey of Similar Uses:** Certain uses may require an estimate based on a survey of similar uses. This approach is more difficult, but it is appropriate for uses that cannot be reasonably estimated based on parking or square footage because of the nature of the use.

TABLE B1 | Maximum Floor Area Allowances per Occupant

Function of Space	Floor Area in Square Feet per Occupant
Accessory storage areas, mechanical equipment room	300 gross
Agricultural building	300 gross
Aircraft hangars	500 gross
Airport terminal	
Baggage claim	20 gross
Baggage handling	300 gross
Waiting areas	15 gross
Assembly	
Gaming floors (keno, slots, etc.)	11 gross
Exhibit gallery and museum	30 net
Assembly with fixed seats	See Section 1004.6
Assembly without fixed seats	
Concentrated (chairs only – not fixed)	7 net
Standing space	5 net
Unconcentrated (tables and chairs)	15 net
Bowling centers (allow five persons for each lane, including 15 feet of runway, and for additional areas)	7 net
Business areas	150 gross
Courtrooms – other than fixed seating areas	40 net
Daycare	35 net
Dormitories	50 gross
Educational	
Classroom area	20 net
Shops and other vocational room areas	50 net
Exercise rooms	50 gross
H-5 fabrication and manufacturing areas	200 gross

Continues on next page

[2] Page G-1, Appendix G of the California Airport Land Use Planning Handbook (2011)

TABLE B1 | Maximum Floor Area Allowances per Occupant (continued)

Function of Space	Floor Area in Square Feet per Occupant
Industrial areas	100 gross
Institutional areas	
Inpatient treatment areas	240 gross
Outpatient areas	100 gross
Sleeping areas	120 gross
Kitchens, commercial	200 gross
Library	
Reading rooms	50 net
Stack area	100 gross
Locker rooms	50 gross
Mercantile	60 gross
Storage, stock, shipping areas	300 gross
Parking garages	200 gross
Residential	200 gross
Skating rinks, swimming pools	
Rink and pool	50 gross
Decks	15 gross
Stages and platforms	15 net
Warehouses	500 gross
1 square foot = 0.0929 m^2	

Source: International Building Code (2018) (Note: A more current version of the IBC table may be used when available.)

IBC SECTION 1004.6 FIXED SEATING

Below is the relevant IBC section for calculating occupant load of assembly with fixed seats uses, as referenced in **Table H1**.

"For areas having *fixed seats* and *aisles*, the *occupant load* shall be determined by the number of *fixed seats* installed therein. The *occupant load* for areas in which *fixed seating* is not installed, such as waiting spaces, shall be determined in accordance with Section 1004.5 and added to the number of *fixed seats*.

The *occupant load* of *wheelchair spaces* and the associated companion seat shall be based on one occupant for each *wheelchair space* and one occupant for the associated companion seat provided in accordance with Section 1109.2.3.

For areas having *fixed seating* without dividing arms, the *occupant load* shall be not less than the number of seats based on one person for each 18 inches (457 mm) of seating length.

The *occupant load* of seating booths shall be based on one person for each 24 inches (610 mm) of booth seat length measured at the backrest of the seating booth."[3]

[3] Section 1004, Occupant Load, Subsection 1004.6, Fixed seating of the International Building Code (2018)

EXAMPLE CALCULATIONS

The following examples are adapted from the Handbook and reflect current Unincorporated Shasta County parking space requirements for illustrative purposes. Implementation of intensity guidance will require calculation by local agency planning staff and use of the most up-to-date development standards.

EXAMPLE 1

Proposed Development: Single-floor, 24,000-square-foot furniture store

A. Calculation Based on Parking Space Requirements

Assume local code requires one parking space per 250 square feet (sf) of use area for a furniture store. Next, assume 1.5 people per automobile for this type of use.

The usage intensity would be:

1) Minimum of 8 parking spaces + 24,000-sf building / 250 sf (1.0 parking space per 250 sf) = 96 additional parking spaces = 104 total required parking spaces
2) 104 parking spaces x 1.5 people per space = 156 people maximum on site
3) 24,000-sf building footprint / 43,560 sf per acre = 0.52-acre building footprint
4) Assuming a relatively balanced occupancy throughout the building and minimal outdoor uses, the usage intensity for a single acre is estimated to be:
    a) Building footprint < 1.0 acre; therefore, maximum people in one acre = building occupancy = 156 people expected per single acre

B. Calculation Based on International Building Code

For the purposes of the IBC-based methodology, the furniture store is assumed to consist of 50 percent retail sales floor (at 60 sf per occupant) and 50 percent warehouse (at 500 sf per occupant); therefore, usage intensities would be estimated as follows:

1) 12,000-sf retail floor area / 60 sf per occupant = 200-person maximum occupancy in retail area
2) 12,000-sf warehouse floor area / 500 sf per occupant = 24-person maximum occupancy in warehouse area
3) Maximum occupancy under IBC assumptions = 200 + 20 = 224 people maximum
4) Assuming typical peak occupancy is 50 percent of IBC numbers = 112 people
5) 112 people / 1 acre gross site size = 112 people expected per single acre

The two methods produce similar results.

EXAMPLE 2

Proposed Development: Single-floor industrial building containing a 95,000-sf warehouse area and 5,000-sf office

A. Calculation Based on Parking Space Requirements

Assume local code requires one parking space per 1,000 sf of use area for industrial businesses and one parking space per 250-sf office. Next, assume one person per automobile for this type of use.

The usage intensity would be:

1) 100,000-sf warehouse / 1,000 sf (1.0 parking space per 1,000 sf) = 100 required parking spaces
2) 5,000-sf office / 250 sf (1.0 parking space per 250 sf) = 20 required parking spaces
3) Maximum required parking spaces under local code = 100 warehouse + 20 office = 120 total parking spaces
4) 120 parking spaces x 1 person per space = 120 people maximum on site
5) 105,000-sf building footprint / 43,560 sf per acre = 2.41-acre building footprint
6) 120 people on site / 2.41-acre footprint = 48 people expected per single acre

B. Calculation Based on International Building Code

For the purposes of the IBC-based methodology, intensities would be estimated as follows:

1) 100,000-sf industrial area / 100sf per occupant = 1,000 people maximum occupancy in warehouse area
2) 5,000-sf business area / 150 sf per occupant = 33 people maximum occupancy in office area
3) Maximum occupancy under IBC assumptions = 1,000 + 33 = 1,033 people maximum
4) Assuming typical peak occupancy is 50 percent of IBC numbers = 517 people
5) 517 people / 2.41 acres gross site size = 214 people expected per single acre

In this instance, the two methods produce very different results. The occupancy estimate of 100 square feet per person is likely low for an industrial facility, even after the 50% adjustment. The 48 people-per-acre estimate using the parking requirement methodology is probably more realistic. The Airport Land Use Commission and local jurisdiction should decide which methodology or combination of methods to use in reviewing development proposals.

GENERAL PLAN CONSISTENCY CHECKLIST

This checklist is intended to assist local agencies with modifications necessary to make their local plans and other local policies consistent with the ALUCP. It is also designed to facilitate Airport Land Use Commission reviews of these local plans and policies.

GENERAL PLAN DOCUMENT

The following items typically appear directly in a general plan document. Amendment of the general plan will be required if there are any conflicts with the ALUCP.

General Plan Consistency Review Checklist	
General Plan Item	**Reference**
Land Use Map — No direct conflicts should exist between proposed new land uses indicated on a general plan land use map and the ALUC land use compatibility criteria	
Residential densities (dwelling units per acre) should not exceed the set limits.	
Proposed nonresidential development needs to be assessed with respect to applicable intensity limits.	
No new land uses of a type listed as specifically prohibited should be shown within affected areas.	
Noise Element — General plan noise elements typically include criteria indicating the maximum noise exposure for which residential development is normally acceptable. This limit must be made consistent with the equivalent ALUCP criteria. Note, however, that a general plan may establish a different limit with respect to aviation-related noise than for noise from other sources (this may be appropriate in that aviation-related noise is sometimes judged to be more objectionable than other types of equally loud noises).	

ZONING OR OTHER POLICY DOCUMENTS

The following items need to be reflected either in the general plan or in a separate policy document such as a combining zone ordinance. If a separate policy document is adopted, modification of the general plan to achieve consistency with the ALUCP may not be required.

Modifications would normally be needed only to eliminate any conflicting language which may be present and to make reference to the separate policy document.

General Plan Consistency Review Checklist – Zoning/Other	
Policy Item	**Reference**
Intensity Limitations on Nonresidential Uses — ALUCPs may establish limits on the usage intensities of commercial, industrial, and other nonresidential land uses. This can be done by duplication of the performance-oriented criteria—specifically, the number of people per acre—indicated in the ALUCP. Alternatively, ALUCs may create a detailed list of land uses which are allowable and/or not allowable within each compatibility zone. For certain land uses, such a list may need to include limits on building sizes, floor area ratios, habitable floors, and/or other design parameters which are equivalent to the usage intensity criteria.	
Identification of Prohibited Uses — ALUCPs may prohibit schools, day care centers, assisted living centers, hospitals, and other uses within a majority of an airport's influence area. The facilities often are permitted or conditionally permitted uses within many commercial or industrial land use designations.	
Open Land Requirements — ALUCP requirements, if any, for assuring that a minimum amount of open land is preserved in the airport vicinity must be reflected in local policies. Normally, the locations which are intended to be maintained as open land would be identified on a map with the total acreage within each compatibility zone indicated. If some of the area included as open land is private property, then policies must be established which assure that the open land will continue to exist as the property develops. Policies specifying the required characteristics of eligible open land should also be established.	
Infill Development — If an ALUCP contains infill policies and a jurisdiction wishes to take advantage of them, the lands that meet the qualifications must be shown on a map.	

Continues on next page

General Plan Consistency Review Checklist – Zoning/Other (continued)	
Policy Item	**Reference**
Height Limitations and Other Hazards to Flight —To protect the airport airspace, limitations must be set on the height of structures and other objects near airports. These limitations are to be based upon FAR Part 77. Restrictions also must be established on other land use characteristics which can cause hazards to flight (specifically, visual or electronic interference with navigation and uses which attract birds). Note that many jurisdictions have already adopted an airport-related hazard and height limit zoning ordinance which, if up to date, will satisfy this consistency requirement.	
Buyer Awareness Measures — Besides disclosure rules already required by state law, as a condition for approval of development within certain compatibility zones, some ALUCPs require either dedication of an avigation easement to the airport proprietor or placement on deeds of a notice regarding airport impacts. If so, local agency policies must contain similar requirements.	
Nonconforming Uses and Reconstruction — Local agency policies regarding nonconforming uses and reconstruction must be equivalent to or more restrictive than those in the ALUCP, if any.	

REVIEW PROCEDURES

In addition to the incorporation of ALUCP compatibility criteria, the local agency implementing these documents must specify the manner in which development proposals will be reviewed for consistency with the compatibility criteria as outlined below.

Actions Always Required to be Submitted for Airport Land Use Commission Review — PUC Section 21676 identifies the types of actions that must be submitted for airport land use commission review. Local policies should either list these actions or, at a minimum, note the local agency's intent to comply with the state statute.

Other Land Use Actions Potentially Subject to Airport Land Use Commission Review — In addition to the above actions, ALUCPs may identify certain major land use actions for which referral to the Airport Land Use Commission is dependent upon agreement between the local agency and Airport Land Use Commission. If the local agency fully complies with all of the items in this general plan consistency check list or has taken the necessary steps to overrule the Airport Land Use Commission, then referral of the additional actions is voluntary. On the other hand, a local agency may elect not to incorporate all of the necessary compatibility criteria and review procedures into its own policies. In this case, referral of major land use actions to the Airport Land Use Commission is mandatory. Local policies should indicate the local agency's intentions in this regard.

Process for Compatibility Reviews by Local Agencies — A local agency chooses to submit only the mandatory actions for Airport Land Use Commission review, then it must establish a policy indicating the procedures which will be used to assure that airport compatibility criteria are addressed during review of other projects. Possibilities include: a standard review procedure checklist which includes reference to compatibility criteria; use of a geographic information system to identify all parcels within the airport influence area; etc.

Variance Procedures — Local procedures for granting of variances to the zoning ordinance must make certain that any such variances do not result in a conflict with the compatibility criteria. Any variance that involves issues of noise, safety, airspace protection, or overflight compatibility as addressed in the ALUCP must be referred to the ALUC for review.

Enforcement — Policies must be established to ensure compliance with compatibility criteria the lifetime of the development. Enforcement procedures are especially necessary with regard to limitations on usage intensities and the heights of trees. An airport combining district zoning ordinance is one means of implementing enforcement requirements.

SAMPLE AVIGATION EASEMENT

This indenture made this ____ day of _____, 20___, between _____, hereinafter referred to as Grantor, and the **[INSERT COUNTY OR CITY NAME]**, a political subdivision in the State of California, hereinafter referred to as Grantee.

The Grantor, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, does hereby grant to the Grantee, its successors and assigns, a perpetual and assignable easement over the following described parcel of land in which the Grantor holds a fee simple estate. The property which is subject to this easement is depicted as _____ on "Exhibit A" attached and is more particularly described as follows:

[INSERT LEGAL DESCRIPTION OF REAL PROPERTY]

The easement applies to the Airspace above an imaginary plane over the real property. The plane is described as follows:

The imaginary plane above the hereinbefore described real property, as such plane is defined by Part 77 of the Federal Aviation Regulations, and consists of a plane [describe approach, transition, or horizontal surface]; the elevation of said plane being based upon the _____ Airport official runway end elevation of _____ feet Above Mean Sea Level (AMSL), as determined by **[INSERT NAME AND DATE OF SURVEY OR AIRPORT LAYOUT PLAN THAT DETERMINES THE ELEVATION]** the approximate dimensions of which said plane are described and shown on Exhibit A attached hereto and incorporated herein by reference.

The aforesaid easement and right-of-way includes, but is not limited to:

(1) For the use and benefit of the public, the easement and continuing right to fly, or cause or permit the flight by any and all persons, or any aircraft, of any and all kinds now or hereinafter known, in, through, across, or about any portion of the Airspace hereinabove described; and

(2) The easement and right to cause or create, or permit or allow to be caused or created within all space above the existing surface of the hereinabove described real property and any and all Airspace laterally adjacent to said real property, such noise, vibration, currents and other effects of air, illumination, and fuel consumption as may be inherent in, or may arise or occur from or during the operation of aircraft of any and all kinds, now or hereafter known or used, for navigation of or flight in air; and

(3) A continuing right to clear and keep clear from the Airspace any portions of buildings, structures, or improvements of any kinds, and of trees or other objects, including the right to remove or demolish those portions of such buildings, structures, improvements, trees, or other things which extend into or above said Airspace, and the right to cut to the ground level and remove any trees which extend into or above the Airspace; and

(4) The right to mark and light, or cause or require to be marked or lighted, as obstructions to air navigation, any and all buildings, structures, or other improvements, and trees or other objects, which extend into or above the Airspace; and

(5) The right of ingress to, passage within, and egress from the hereinabove described real property, for the purposes described in subparagraphs (3) and (4) above at reasonable times and after reasonable notice.

For and on behalf of itself, its successors and assigns, the Grantor hereby covenants with the **[INSERT COUNTY OR CITY NAME]**, for the direct benefit of the real property constituting the _____ Airport hereinafter described, that neither the Grantor, nor its successors in interest or assigns will construct, install, erect, place or grow in or upon the hereinabove described real property, nor will they permit to allow, any building structure, improvement, tree or other object which extends into or above the Airspace, or which constitutes an obstruction to air navigation, or which obstructs or interferes with the use of the easement and rights-of-way herein granted.

The easements and rights-of-way herein granted shall be deemed both appurtenant to and for the direct benefit of that real property which constitutes the _____ Airport, in the **[INSERT COUNTY OR CITY NAME]**, State of California; and shall further be deemed in gross, being conveyed to the Grantee for the benefit of the Grantee and any and all members of the general public who may use said easement or right-of-way, in landing at, taking off from or operating such aircraft in or about the _____ Airport, or in otherwise flying through said Airspace.

Grantor, together with its successors in interest and assigns, hereby waives its right to legal action against Grantee, its successors, or assigns for monetary damages or other redress due to impacts, as described in Paragraph (2) of the granted rights of easement, associated with aircraft operations in the air or on the ground at the airport, including future increases in the volume or changes in location of said operations.

Furthermore, Grantor, its successors, and assigns shall have no duty to avoid or mitigate such damages through physical modification of airport facilities or establishment or modification of aircraft operational procedures or restrictions. However, this waiver shall not apply if the airport role or character of its usage (as identified in an adopted airport master plan, for example) changes in a fundamental manner which could not reasonably have been anticipated at the time of the granting of this easement and which results in a substantial increase in the impacts associated with aircraft operations. Also, this grant of easement shall not operate to deprive the Grantor, its successors or assigns, of any rights which may from time to time have against any air carrier or private operator for negligent or unlawful operation of aircraft.

These covenants and agreements run with the land and are binding upon the heirs, administrators, executors, successors and assigns of the Grantor, and, for the purpose of this instrument, the real property firstly hereinabove described is the servient tenement and said _____ Airport is the dominant tenement.

DATED: _____

State of }

ss

County of }

On _____, before me, the undersigned, a Notary Public in and for said County and State, personally appeared _____, and _____ known to me to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same.

WITNESS my hand and official seal.

_____

Notary Public

SAMPLE DEED NOTICE

A statement similar to the following should be included on the deed for any real property subject to the deed notice requirements set forth in the *Comprehensive Land Use Plan for the Redding Municipal Airport and Surrounding Area*. Such notice should be recorded by Shasta County. Also, this deed notice should be included on any parcel map, tentative map, or final map for subdivision approval.

The *Comprehensive Land Use Plan (CLUP)* for Redding Regional Airport and **[INSERT COUNTY/CITY NAME]** Ordinance (Ordinance No. _____) identify the Airport Influence Area (AIA) for Redding Regional Airport. Properties within this area are routinely subject to overflights by aircraft using this public-use airport and, as a result, residents may experience inconvenience, annoyance, or discomfort arising from the noise of such operations. State law (Public Utilities Code Section 21670 et seq.) establishes the importance of public-use airports to protect the public interest of the people of the state of California. Residents of property near such airports should therefore be prepared to accept the inconvenience, annoyance, or discomfort from normal aircraft operations. Residents also should be aware that the current volume of aircraft activity may increase in the future in response to Redding area population and economic growth. Any subsequent deed conveying this parcel or subdivisions thereof shall contain a statement in substantially this form.

Appendix C
SUPPORTING MATERIALS

This appendix includes the following supporting information related to airport land use compatibility planning:

- Title 14 Code of Federal Regulations Part 77 – *Safe, Efficient Use, and Preservation of the Navigable Airspace*
- Safety Supporting Information from the *California Airport Land Use Compatibility Planning Handbook*

This content is from the eCFR and is authoritative but unofficial.

Title 14 —Aeronautics and Space
Chapter I —Federal Aviation Administration, Department of Transportation
Subchapter E —Airspace

PART 77—SAFE, EFFICIENT USE, AND PRESERVATION OF THE NAVIGABLE AIRSPACE

Authority: 49 U.S.C. 106 (g), 40103, 40113-40114, 44502, 44701, 44718, 46101-46102, 46104.

Source: Docket No. FAA-2006-25002, 75 FR 42303, July 21, 2010, unless otherwise noted.

Subpart A—General

§ 77.1 Purpose.

This part establishes:

(a) The requirements to provide notice to the FAA of certain proposed construction, or the alteration of existing structures;

(b) The standards used to determine obstructions to air navigation, and navigational and communication facilities;

(c) The process for aeronautical studies of obstructions to air navigation or navigational facilities to determine the effect on the safe and efficient use of navigable airspace, air navigation facilities or equipment; and

(d) The process to petition the FAA for discretionary review of determinations, revisions, and extensions of determinations.

§ 77.3 Definitions.

For the purpose of this part:

Non-precision instrument runway means a runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight-in non-precision instrument approach procedure has been approved, or planned, and for which no precision approach facilities are planned, or indicated on an FAA planning document or military service military airport planning document.

Planned or proposed airport is an airport that is the subject of at least one of the following documents received by the FAA:

(1) Airport proposals submitted under 14 CFR part 157.

(2) Airport Improvement Program requests for aid.

(3) Notices of existing airports where prior notice of the airport construction or alteration was not provided as required by 14 CFR part 157.

(4) Airport layout plans.

(5) DOD proposals for airports used only by the U.S. Armed Forces.

(6) DOD proposals on joint-use (civil-military) airports.

(7) Completed airport site selection feasibility study.

Precision instrument runway means a runway having an existing instrument approach procedure utilizing an Instrument Landing System (ILS), or a Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is so indicated by an FAA-approved airport layout plan; a military service approved military airport layout plan; any other FAA planning document, or military service military airport planning document.

Public use airport is an airport available for use by the general public without a requirement for prior approval of the airport owner or operator.

Seaplane base is considered to be an airport only if its sea lanes are outlined by visual markers.

Utility runway means a runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight and less.

Visual runway means a runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on an FAA-approved airport layout plan, a military service approved military airport layout plan, or by any planning document submitted to the FAA by competent authority.

Subpart B—Notice Requirements

§ 77.5 Applicability.

(a) If you propose any construction or alteration described in § 77.9, you must provide adequate notice to the FAA of that construction or alteration.

(b) If requested by the FAA, you must also file supplemental notice before the start date and upon completion of certain construction or alterations that are described in § 77.9.

(c) Notice received by the FAA under this subpart is used to:

(1) Evaluate the effect of the proposed construction or alteration on safety in air commerce and the efficient use and preservation of the navigable airspace and of airport traffic capacity at public use airports;

(2) Determine whether the effect of proposed construction or alteration is a hazard to air navigation;

(3) Determine appropriate marking and lighting recommendations, using FAA Advisory Circular 70/7460-1, Obstruction Marking and Lighting;

(4) Determine other appropriate measures to be applied for continued safety of air navigation; and

(5) Notify the aviation community of the construction or alteration of objects that affect the navigable airspace, including the revision of charts, when necessary.

§ 77.7 Form and time of notice.

(a) If you are required to file notice under § 77.9, you must submit to the FAA a completed FAA Form 7460-1, Notice of Proposed Construction or Alteration. FAA Form 7460-1 is available at FAA regional offices and on the Internet.

(b) You must submit this form at least 45 days before the start date of the proposed construction or alteration or the date an application for a construction permit is filed, whichever is earliest.

(c) If you propose construction or alteration that is also subject to the licensing requirements of the Federal Communications Commission (FCC), you must submit notice to the FAA on or before the date that the application is filed with the FCC.

(d) If you propose construction or alteration to an existing structure that exceeds 2,000 ft. in height above ground level (AGL), the FAA presumes it to be a hazard to air navigation that results in an inefficient use of airspace. You must include details explaining both why the proposal would not constitute a hazard to air navigation and why it would not cause an inefficient use of airspace.

(e) The 45-day advance notice requirement is waived if immediate construction or alteration is required because of an emergency involving essential public services, public health, or public safety. You may provide notice to the FAA by any available, expeditious means. You must file a completed FAA Form 7460-1 within 5 days of the initial notice to the FAA. Outside normal business hours, the nearest flight service station will accept emergency notices.

§ 77.9 Construction or alteration requiring notice.

If requested by the FAA, or if you propose any of the following types of construction or alteration, you must file notice with the FAA of:

(a) Any construction or alteration that is more than 200 ft. AGL at its site.

(b) Any construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:

(1) 100 to 1 for a horizontal distance of 20,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway more than 3,200 ft. in actual length, excluding heliports.

(2) 50 to 1 for a horizontal distance of 10,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway no more than 3,200 ft. in actual length, excluding heliports.

(3) 25 to 1 for a horizontal distance of 5,000 ft. from the nearest point of the nearest landing and takeoff area of each heliport described in paragraph (d) of this section.

(c) Any highway, railroad, or other traverse way for mobile objects, of a height which, if adjusted upward 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance, 15 feet for any other public roadway, 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road, 23 feet for a railroad, and for a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it, would exceed a standard of paragraph (a) or (b) of this section.

(d) Any construction or alteration on any of the following airports and heliports:

(1) A public use airport listed in the Airport/Facility Directory, Alaska Supplement, or Pacific Chart Supplement of the U.S. Government Flight Information Publications;

(2) A military airport under construction, or an airport under construction that will be available for public use;

(3) An airport operated by a Federal agency or the DOD.

(4) An airport or heliport with at least one FAA-approved instrument approach procedure.

(e) You do not need to file notice for construction or alteration of:

(1) Any object that will be shielded by existing structures of a permanent and substantial nature or by natural terrain or topographic features of equal or greater height, and will be located in the congested area of a city, town, or settlement where the shielded structure will not adversely affect safety in air navigation;

(2) Any air navigation facility, airport visual approach or landing aid, aircraft arresting device, or meteorological device meeting FAA-approved siting criteria or an appropriate military service siting criteria on military airports, the location and height of which are fixed by its functional purpose;

(3) Any construction or alteration for which notice is required by any other FAA regulation.

(4) Any antenna structure of 20 feet or less in height, except one that would increase the height of another antenna structure.

§ 77.11 Supplemental notice requirements.

(a) You must file supplemental notice with the FAA when:

(1) The construction or alteration is more than 200 feet in height AGL at its site; or

(2) Requested by the FAA.

(b) You must file supplemental notice on a prescribed FAA form to be received within the time limits specified in the FAA determination. If no time limit has been specified, you must submit supplemental notice of construction to the FAA within 5 days after the structure reaches its greatest height.

(c) If you abandon a construction or alteration proposal that requires supplemental notice, you must submit notice to the FAA within 5 days after the project is abandoned.

(d) If the construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

Subpart C—Standards for Determining Obstructions to Air Navigation or Navigational Aids or Facilities

§ 77.13 Applicability.

This subpart describes the standards used for determining obstructions to air navigation, navigational aids, or navigational facilities. These standards apply to the following:

(a) Any object of natural growth, terrain, or permanent or temporary construction or alteration, including equipment or materials used and any permanent or temporary apparatus.

(b) The alteration of any permanent or temporary existing structure by a change in its height, including appurtenances, or lateral dimensions, including equipment or material used therein.

§ 77.15 Scope.

(a) This subpart describes standards used to determine obstructions to air navigation that may affect the safe and efficient use of navigable airspace and the operation of planned or existing air navigation and communication facilities. Such facilities include air navigation aids, communication equipment, airports, Federal airways, instrument approach or departure procedures, and approved off-airway routes.

(b) Objects that are considered obstructions under the standards described in this subpart are presumed hazards to air navigation unless further aeronautical study concludes that the object is not a hazard. Once further aeronautical study has been initiated, the FAA will use the standards in this subpart, along with FAA policy and guidance material, to determine if the object is a hazard to air navigation.

(c) The FAA will apply these standards with reference to an existing airport facility, and airport proposals received by the FAA, or the appropriate military service, before it issues a final determination.

(d) For airports having defined runways with specially prepared hard surfaces, the primary surface for each runway extends 200 feet beyond each end of the runway. For airports having defined strips or pathways used regularly for aircraft takeoffs and landings, and designated runways, without specially prepared hard surfaces, each end of the primary surface for each such runway shall coincide with the corresponding end of the runway. At airports, excluding seaplane bases, having a defined landing and takeoff area with no defined pathways for aircraft takeoffs and landings, a determination must be made as to which portions of the landing and takeoff area are regularly used as landing and takeoff pathways. Those determined pathways must be considered runways, and an appropriate primary surface as defined in § 77.19 will be considered as longitudinally centered on each such runway. Each end of that primary surface must coincide with the corresponding end of that runway.

(e) The standards in this subpart apply to construction or alteration proposals on an airport (including heliports and seaplane bases with marked lanes) if that airport is one of the following before the issuance of the final determination:

(1) Available for public use and is listed in the Airport/Facility Directory, Supplement Alaska, or Supplement Pacific of the U.S. Government Flight Information Publications; or

(2) A planned or proposed airport or an airport under construction of which the FAA has received actual notice, except DOD airports, where there is a clear indication the airport will be available for public use; or,

(3) An airport operated by a Federal agency or the DOD; or,

(4) An airport that has at least one FAA-approved instrument approach.

§ 77.17 Obstruction standards.

(a) An existing object, including a mobile object, is, and a future object would be an obstruction to air navigation if it is of greater height than any of the following heights or surfaces:

(1) A height of 499 feet AGL at the site of the object.

(2) A height that is 200 feet AGL, or above the established airport elevation, whichever is higher, within 3 nautical miles of the established reference point of an airport, excluding heliports, with its longest runway more than 3,200 feet in actual length, and that height increases in the proportion of 100 feet for each additional nautical mile from the airport up to a maximum of 499 feet.

(3) A height within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area, which would result in the vertical distance between any point on the object and an established minimum instrument flight altitude within that area or segment to be less than the required obstacle clearance.

(4) A height within an en route obstacle clearance area, including turn and termination areas, of a Federal Airway or approved off-airway route, that would increase the minimum obstacle clearance altitude.

(5) The surface of a takeoff and landing area of an airport or any imaginary surface established under § 77.19, 77.21, or 77.23. However, no part of the takeoff or landing area itself will be considered an obstruction.

(b) Except for traverse ways on or near an airport with an operative ground traffic control service furnished by an airport traffic control tower or by the airport management and coordinated with the air traffic control service, the standards of paragraph (a) of this section apply to traverse ways used or to be used for the passage of mobile objects only after the heights of these traverse ways are increased by:

(1) 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance.

(2) 15 feet for any other public roadway.

(3) 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road.

(4) 23 feet for a railroad.

(5) For a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it.

§ 77.19 Civil airport imaginary surfaces.

The following civil airport imaginary surfaces are established with relation to the airport and to each runway. The size of each such imaginary surface is based on the category of each runway according to the type of approach available or planned for that runway. The slope and dimensions of the approach surface applied to each end of a runway are determined by the most precise approach procedure existing or planned for that runway end.

(a) ***Horizontal surface.*** A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of a specified radii from the center of each end of the primary surface of each runway of each airport and connecting the adjacent arcs by lines tangent to those arcs. The radius of each arc is:

(1) 5,000 feet for all runways designated as utility or visual;

(2) 10,000 feet for all other runways. The radius of the arc specified for each end of a runway will have the same arithmetical value. That value will be the highest determined for either end of the runway. When a 5,000-foot arc is encompassed by tangents connecting two adjacent 10,000-foot arcs, the 5,000-foot arc shall be disregarded on the construction of the perimeter of the horizontal surface.

(b) ***Conical surface.*** A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.

(c) ***Primary surface.*** A surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway; but when the runway has no specially prepared hard surface, the primary surface ends at each end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The width of the primary surface is:

(1) 250 feet for utility runways having only visual approaches.

(2) 500 feet for utility runways having non-precision instrument approaches.

(3) For other than utility runways, the width is:

(i) 500 feet for visual runways having only visual approaches.

(ii) 500 feet for non-precision instrument runways having visibility minimums greater than three-fourths statute mile.

(iii) 1,000 feet for a non-precision instrument runway having a non-precision instrument approach with visibility minimums as low as three-fourths of a statute mile, and for precision instrument runways.

(iv) The width of the primary surface of a runway will be that width prescribed in this section for the most precise approach existing or planned for either end of that runway.

(d) ***Approach surface.*** A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of each runway based upon the type of approach available or planned for that runway end.

(1) The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width of:

(i) 1,250 feet for that end of a utility runway with only visual approaches;

(ii) 1,500 feet for that end of a runway other than a utility runway with only visual approaches;

(iii) 2,000 feet for that end of a utility runway with a non-precision instrument approach;

(iv) 3,500 feet for that end of a non-precision instrument runway other than utility, having visibility minimums greater that three-fourths of a statute mile;

(v) 4,000 feet for that end of a non-precision instrument runway, other than utility, having a non-precision instrument approach with visibility minimums as low as three-fourths statute mile; and

(vi) 16,000 feet for precision instrument runways.

(2) The approach surface extends for a horizontal distance of:

(i) 5,000 feet at a slope of 20 to 1 for all utility and visual runways;

(ii) 10,000 feet at a slope of 34 to 1 for all non-precision instrument runways other than utility; and

(iii) 10,000 feet at a slope of 50 to 1 with an additional 40,000 feet at a slope of 40 to 1 for all precision instrument runways.

(3) The outer width of an approach surface to an end of a runway will be that width prescribed in this subsection for the most precise approach existing or planned for that runway end.

(e) ***Transitional surface.*** These surfaces extend outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces. Transitional surfaces for those portions of the precision approach surface which project through and beyond the limits of the conical surface, extend a distance of 5,000 feet measured horizontally from the edge of the approach surface and at right angles to the runway centerline.

§ 77.21 Department of Defense (DOD) airport imaginary surfaces.

(a) ***Related to airport reference points.*** These surfaces apply to all military airports. For the purposes of this section, a military airport is any airport operated by the DOD.

(1) ***Inner horizontal surface.*** A plane that is oval in shape at a height of 150 feet above the established airfield elevation. The plane is constructed by scribing an arc with a radius of 7,500 feet about the centerline at the end of each runway and interconnecting these arcs with tangents.

(2) ***Conical surface.*** A surface extending from the periphery of the inner horizontal surface outward and upward at a slope of 20 to 1 for a horizontal distance of 7,000 feet to a height of 500 feet above the established airfield elevation.

(3) ***Outer horizontal surface.*** A plane, located 500 feet above the established airfield elevation, extending outward from the outer periphery of the conical surface for a horizontal distance of 30,000 feet.

(b) ***Related to runways.*** These surfaces apply to all military airports.

(1) ***Primary surface.*** A surface located on the ground or water longitudinally centered on each runway with the same length as the runway. The width of the primary surface for runways is 2,000 feet. However, at established bases where substantial construction has taken place in accordance with a previous lateral clearance criteria, the 2,000-foot width may be reduced to the former criteria.

(2) ***Clear zone surface.*** A surface located on the ground or water at each end of the primary surface, with a length of 1,000 feet and the same width as the primary surface.

(3) ***Approach clearance surface.*** An inclined plane, symmetrical about the runway centerline extended, beginning 200 feet beyond each end of the primary surface at the centerline elevation of the runway end and extending for 50,000 feet. The slope of the approach clearance surface is 50 to 1 along the runway centerline extended until it reaches an elevation of 500 feet above the established airport elevation. It then continues horizontally at this elevation to a point 50,000 feet from the point of beginning. The width of this surface at the runway end is the same as the primary surface, it flares uniformly, and the width at 50,000 is 16,000 feet.

(4) ***Transitional surfaces.*** These surfaces connect the primary surfaces, the first 200 feet of the clear zone surfaces, and the approach clearance surfaces to the inner horizontal surface, conical surface, outer horizontal surface or other transitional surfaces. The slope of the transitional surface is 7 to 1 outward and upward at right angles to the runway centerline.

§ 77.23 Heliport imaginary surfaces.

(a) ***Primary surface.*** The area of the primary surface coincides in size and shape with the designated take-off and landing area. This surface is a horizontal plane at the elevation of the established heliport elevation.

(b) ***Approach surface.*** The approach surface begins at each end of the heliport primary surface with the same width as the primary surface, and extends outward and upward for a horizontal distance of 4,000 feet where its width is 500 feet. The slope of the approach surface is 8 to 1 for civil heliports and 10 to 1 for military heliports.

(c) ***Transitional surfaces.*** These surfaces extend outward and upward from the lateral boundaries of the primary surface and from the approach surfaces at a slope of 2 to 1 for a distance of 250 feet measured horizontally from the centerline of the primary and approach surfaces.

Subpart D—Aeronautical Studies and Determinations

§ 77.25 Applicability.

(a) This subpart applies to any aeronautical study of a proposed construction or alteration for which notice to the FAA is required under § 77.9.

(b) The purpose of an aeronautical study is to determine whether the aeronautical effects of the specific proposal and, where appropriate, the cumulative impact resulting from the proposed construction or alteration when combined with the effects of other existing or proposed structures, would constitute a hazard to air navigation.

(c) The obstruction standards in subpart C of this part are supplemented by other manuals and directives used in determining the effect on the navigable airspace of a proposed construction or alteration. When the FAA needs additional information, it may circulate a study to interested parties for comment.

§ 77.27 Initiation of studies.

The FAA will conduct an aeronautical study when:

(a) Requested by the sponsor of any proposed construction or alteration for which a notice is submitted; or

(b) The FAA determines a study is necessary.

§ 77.29 Evaluating aeronautical effect.

(a) The FAA conducts an aeronautical study to determine the impact of a proposed structure, an existing structure that has not yet been studied by the FAA, or an alteration of an existing structure on aeronautical operations, procedures, and the safety of flight. These studies include evaluating:

(1) The impact on arrival, departure, and en route procedures for aircraft operating under visual flight rules;

(2) The impact on arrival, departure, and en route procedures for aircraft operating under instrument flight rules;

(3) The impact on existing and planned public use airports;

(4) Airport traffic capacity of existing public use airports and public use airport development plans received before the issuance of the final determination;

(5) Minimum obstacle clearance altitudes, minimum instrument flight rules altitudes, approved or planned instrument approach procedures, and departure procedures;

(6) The potential effect on ATC radar, direction finders, ATC tower line-of-sight visibility, and physical or electromagnetic effects on air navigation, communication facilities, and other surveillance systems;

(7) The aeronautical effects resulting from the cumulative impact of a proposed construction or alteration of a structure when combined with the effects of other existing or proposed structures.

(b) If you withdraw the proposed construction or alteration or revise it so that it is no longer identified as an obstruction, or if no further aeronautical study is necessary, the FAA may terminate the study.

§ 77.31 Determinations.

(a) The FAA will issue a determination stating whether the proposed construction or alteration would be a hazard to air navigation, and will advise all known interested persons.

(b) The FAA will make determinations based on the aeronautical study findings and will identify the following:

(1) The effects on VFR/IFR aeronautical departure/arrival operations, air traffic procedures, minimum flight altitudes, and existing, planned, or proposed airports listed in § 77.15(e) of which the FAA has received actual notice prior to issuance of a final determination.

(2) The extent of the physical and/or electromagnetic effect on the operation of existing or proposed air navigation facilities, communication aids, or surveillance systems.

(c) The FAA will issue a Determination of Hazard to Air Navigation when the aeronautical study concludes that the proposed construction or alteration will exceed an obstruction standard and would have a substantial aeronautical impact.

(d) A Determination of No Hazard to Air Navigation will be issued when the aeronautical study concludes that the proposed construction or alteration will exceed an obstruction standard but would not have a substantial aeronautical impact to air navigation. A Determination of No Hazard to Air Navigation may include the following:

(1) Conditional provisions of a determination.

(2) Limitations necessary to minimize potential problems, such as the use of temporary construction equipment.

(3) Supplemental notice requirements, when required.

(4) Marking and lighting recommendations, as appropriate.

(e) The FAA will issue a Determination of No Hazard to Air Navigation when a proposed structure does not exceed any of the obstruction standards and would not be a hazard to air navigation.

§ 77.33 Effective period of determinations.

(a) The effective date of a determination not subject to discretionary review under 77.37(b) is the date of issuance. The effective date of all other determinations for a proposed or existing structure is 40 days from the date of issuance, provided a valid petition for review has not been received by the FAA. If a valid petition for review is filed, the determination will not become final, pending disposition of the petition.

(b) Unless extended, revised, or terminated, each Determination of No Hazard to Air Navigation issued under this subpart expires 18 months after the effective date of the determination, or on the date the proposed construction or alteration is abandoned, whichever is earlier.

(c) A Determination of Hazard to Air Navigation has no expiration date.

[Doc. No. FAA-2006-25002, 75 FR 42303, July 21, 2010, as amended by Amdt. 77-13-A, 76 FR 2802, Jan. 18, 2011]

§ 77.35 Extensions, terminations, revisions and corrections.

(a) You may petition the FAA official that issued the Determination of No Hazard to Air Navigation to revise or reconsider the determination based on new facts or to extend the effective period of the determination, provided that:

(1) Actual structural work of the proposed construction or alteration, such as the laying of a foundation, but not including excavation, has not been started; and

(2) The petition is submitted at least 15 days before the expiration date of the Determination of No Hazard to Air Navigation.

(b) A Determination of No Hazard to Air Navigation issued for those construction or alteration proposals not requiring an FCC construction permit may be extended by the FAA one time for a period not to exceed 18 months.

(c) A Determination of No Hazard to Air Navigation issued for a proposal requiring an FCC construction permit may be granted extensions for up to 18 months, provided that:

(1) You submit evidence that an application for a construction permit/license was filed with the FCC for the associated site within 6 months of issuance of the determination; and

(2) You submit evidence that additional time is warranted because of FCC requirements; and

(3) Where the FCC issues a construction permit, a final Determination of No Hazard to Air Navigation is effective until the date prescribed by the FCC for completion of the construction. If an extension of the original FCC completion date is needed, an extension of the FAA determination must be requested from the Obstruction Evaluation Service (OES).

(4) If the Commission refuses to issue a construction permit, the final determination expires on the date of its refusal.

Subpart E—Petitions for Discretionary Review

§ 77.37 General.

(a) If you are the sponsor, provided a substantive aeronautical comment on a proposal in an aeronautical study, or have a substantive aeronautical comment on the proposal but were not given an opportunity to state it, you may petition the FAA for a discretionary review of a determination, revision, or extension of a determination issued by the FAA.

(b) You may not file a petition for discretionary review for a Determination of No Hazard that is issued for a temporary structure, marking and lighting recommendation, or when a proposed structure or alteration does not exceed obstruction standards contained in subpart C of this part.

§ 77.39 Contents of a petition.

(a) You must file a petition for discretionary review in writing and it must be received by the FAA within 30 days after the issuance of a determination under § 77.31, or a revision or extension of the determination under § 77.35.

(b) The petition must contain a full statement of the aeronautical basis on which the petition is made, and must include new information or facts not previously considered or presented during the aeronautical study, including valid aeronautical reasons why the determination, revisions, or extension made by the FAA should be reviewed.

(c) In the event that the last day of the 30-day filing period falls on a weekend or a day the Federal government is closed, the last day of the filing period is the next day that the government is open.

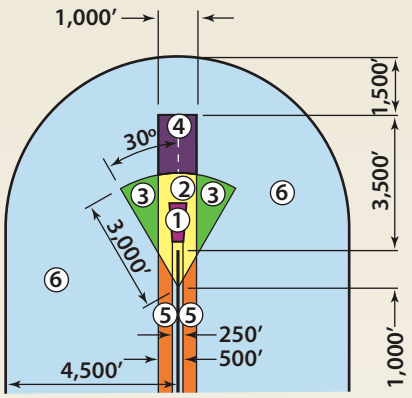
(d) The FAA will inform the petitioner or sponsor (if other than the petitioner) and the FCC (whenever an FCC-related proposal is involved) of the filing of the petition and that the determination is not final pending disposition of the petition.

§ 77.41 Discretionary review results.

(a) If discretionary review is granted, the FAA will inform the petitioner and the sponsor (if other than the petitioner) of the issues to be studied and reviewed. The review may include a request for comments and a review of all records from the initial aeronautical study.

(b) If discretionary review is denied, the FAA will notify the petitioner and the sponsor (if other than the petitioner), and the FCC, whenever a FCC-related proposal is involved, of the basis for the denial along with a statement that the determination is final.

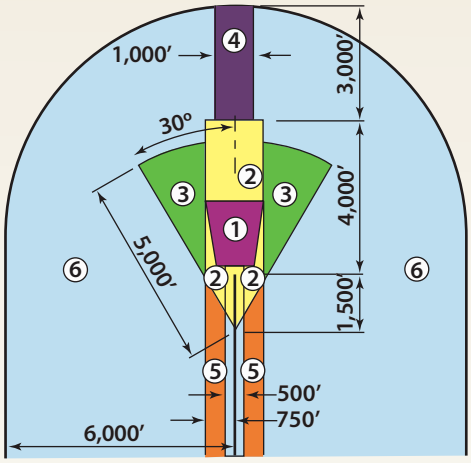
(c) After concluding the discretionary review process, the FAA will revise, affirm, or reverse the determination.



SHORT GENERAL AVIATION RUNWAY

Assumptions:

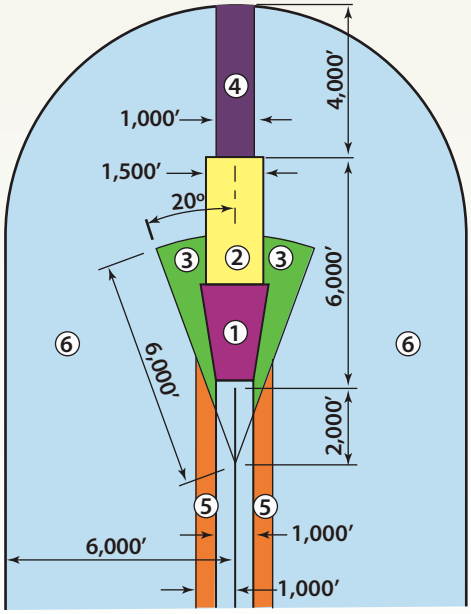
- Length less than 4,000 feet
- Approach visibility minimums ≥ 1 mile or visual approach only
- Zone 1 = 250′ x 450′ x 1,000′



MEDIUM GENERAL AVIATION RUNWAY

Assumptions:

- Length 4,000 to 5,999 feet
- Approach visibility minimums ≥ ¾ mile and < 1 mile
- Zone 1 = 1,000′ x 1,510′ x 1,700



LONG GENERAL AVIATION RUNWAY

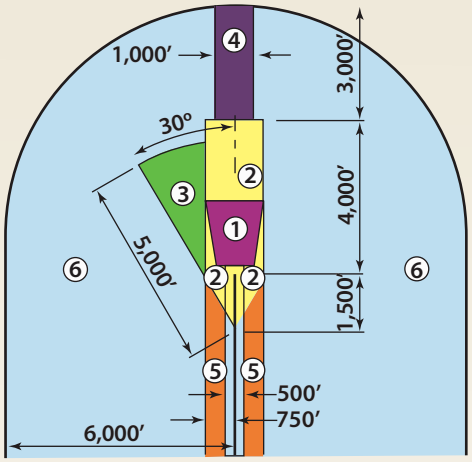
Assumptions:

- Length 6,000 or more
- Approach visibility minimums < ¾ mile
- Zone 1 = 1,000′ x 1,750′ x 2,500

LEGEND

① Runway Protection Zone	③ Inner Turning Zone	⑤ Sideline Zone
② Inner Approach/Departure Zone	④ Outer Approach/Departure Zone	⑥ Traffic Pattern Zone

Source: California Airport Land Use Planning Handbook, 2011.

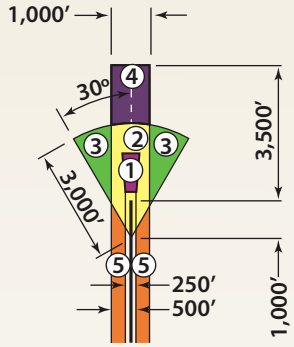


GENERAL AVIATION RUNWAY WITH SINGLE-SIDED TRAFFIC PATTERN

Assumptions:

- **Length 4,000 to 5,999 feet**
- **Approach visibility minimums ≥ ¾ mile and < 1 mile**
- **Zone 1 = 1,000′ x 1,510′ x 1,700**

See Note.

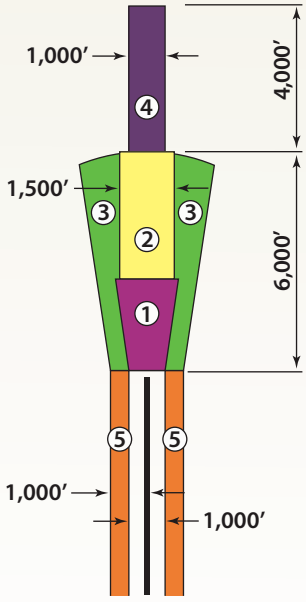


LOW ACTIVITY GENERAL AVIATION RUNWAY

Assumptions:

- **Less than 2,000 takeoffs and landings per year at individual runway end.**
- **Length less than 4,000 feet**
- **Approach visibility minimums ≥ 1 mile or visual approach only**

See Note.



LARGE AIR CARRIER RUNWAY

Assumptions:

- **Minimal light-aircraft general aviation activity**
- **Predominately straight-in and straight-out flight routes**
- **Approach visibility minimums < ¾ mile**

See Note.

Note:
RPZ (Zone 1) size in each example is as indicated by FAA criteria for the approach type assumed. Adjustment may be necessary if the Approach type differs.

These examples are intended to provide general guidance for establishment of airport safety compatibility zones. They do not represent California Department of Transportation standards of policy.

LEGEND

- ① Runway Protection Zone
- ② Inner Approach/Departure Zone
- ③ Inner Turning Zone
- ④ Outer Approach/Departure Zone
- ⑤ Sideline Zone
- ⑥ Traffic Pattern Zone

Source: California Airport Land Use Planning Handbook, 2011.

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